A DISMAL DECADE: U.S. RAILROADS FIGHT BACK p. 12

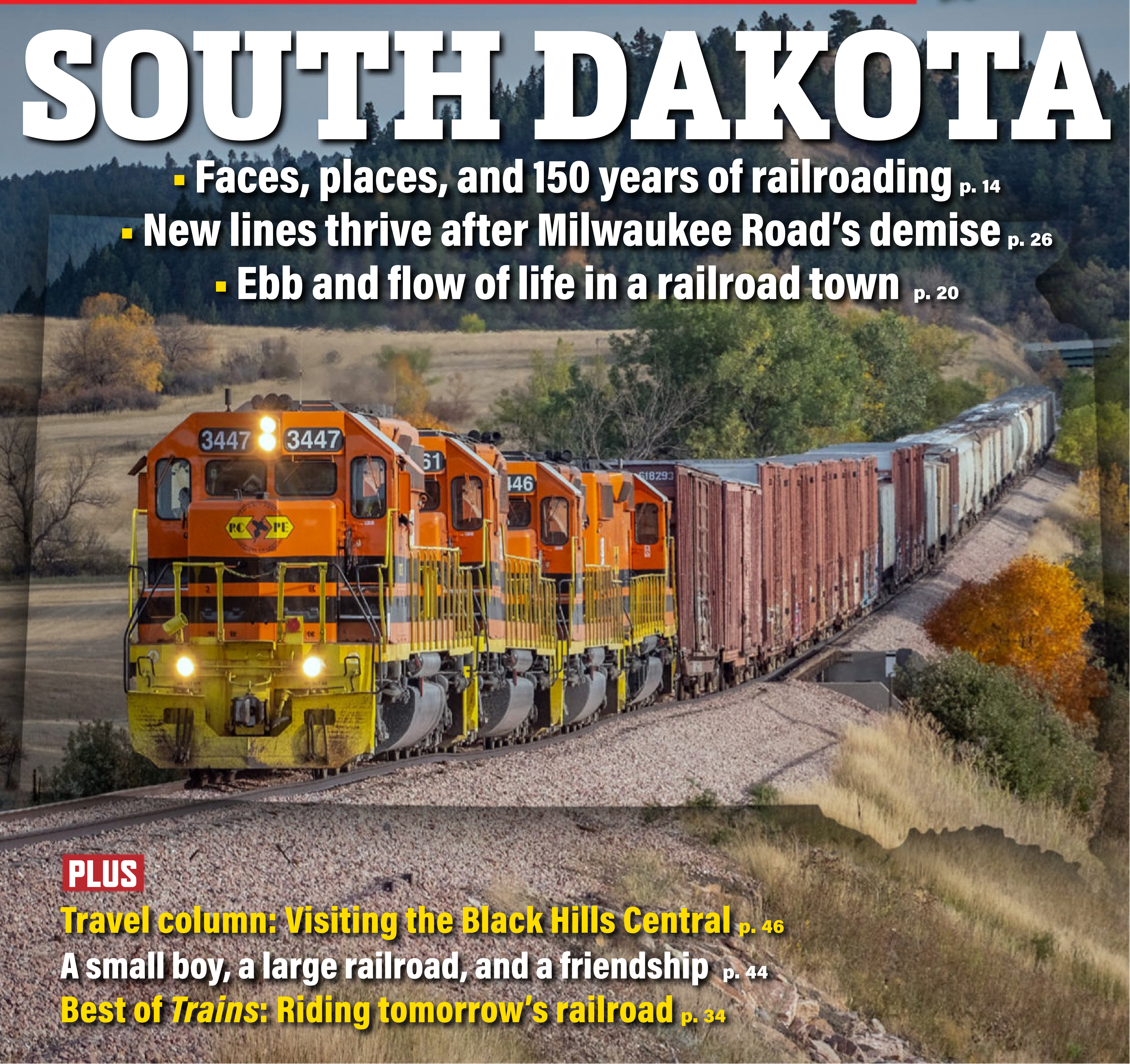
Trains®

www.Trains.com ▪ August 2023

THE magazine of railroading

CP, KCS merger goes to court p. 6

CN talks schedule p. 8



SOUTH DAKOTA

- Faces, places, and 150 years of railroading p. 14
- New lines thrive after Milwaukee Road's demise p. 26
- Ebb and flow of life in a railroad town p. 20

PLUS

Travel column: Visiting the Black Hills Central p. 46

A small boy, a large railroad, and a friendship p. 44

Best of *Trains*: Riding tomorrow's railroad p. 34

VISIT…

LANZAROTE
Caliente.com

6 DECADES OF STORIES

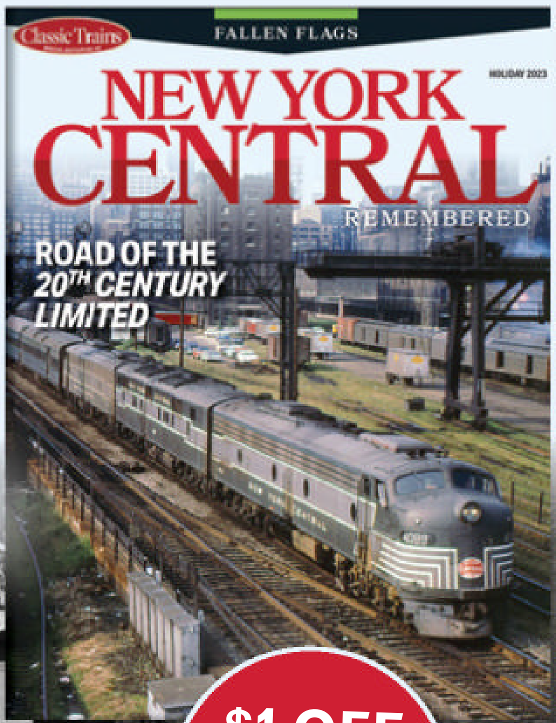
INCLUDES FOLDOUT MAP!

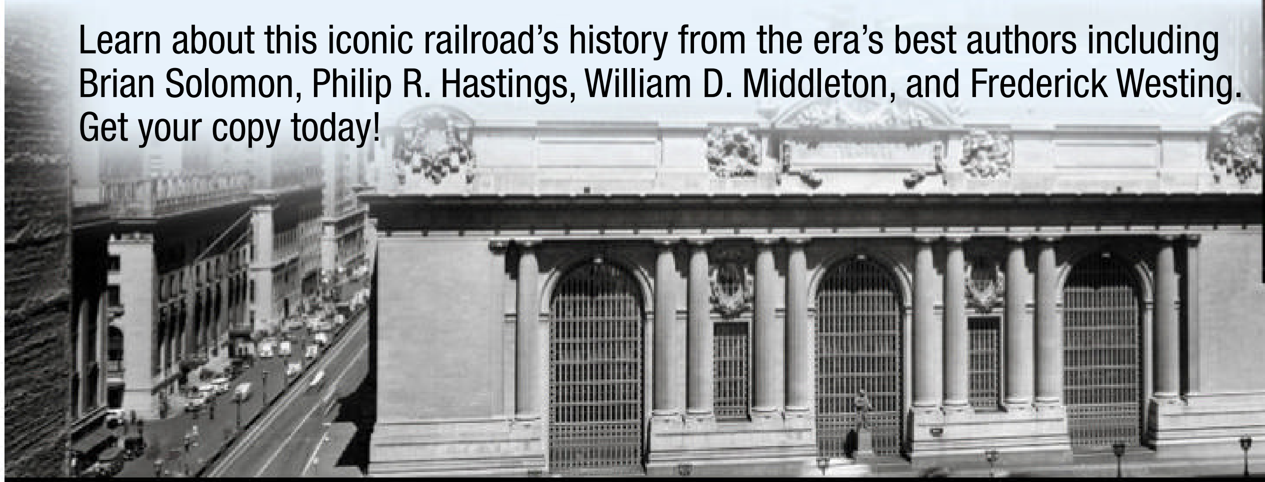
Explore the newest release in the Fallen Flags special issue series! *Classic Trains* is back with *New York Central Remembered*, 100-pages covering the history of New York Central, *20th Century Limited* passenger trains, Grand Central Terminal, Water Level Route, and more.

Featuring:

- The railroad's expansive diesel locomotive roster
- Famous streamlined passenger trains dubbed "The Great Steel Fleet"
- 5 aerial photo studies of its major facilities
- And more!

Learn about this iconic railroad's history from the era's best authors including Brian Solomon, Philip R. Hastings, William D. Middleton, and Frederick Westing. Get your copy today!


Classic Trains
FALLEN FLAGS
HOLIDAY 2023
NEW YORK CENTRAL
REMEMBERED
ROAD OF THE 20TH CENTURY LIMITED



$1 OFF + FREE SHIPPING!

KALMBACH HOBBY STORE

Pre-order this special issue today at

KalmbachHobbyStore.com/CS16

Offer expires 10/12/23 at 11:59 p.m. CT. Free standard shipping to U.S. addresses only. *New York Central Remembered* will arrive in October 2023.
Sales tax and retail delivery fee where applicable.

BACK BY POPULAR DEMAND!

CHICAGO, AMERICA'S RAILROAD CAPITAL

Trains Magazine is bringing back the extremely popular *Chicago, America's Railroad Capital* special issue.

The city of Chicago holds the distinction of being the center of the country's railroad industry. Some highlights in this issue include:

- A historical overview of how and why the city became the nation's rail hub
- The L: A look at the city's rapid transit system
- A look at seven Chicago train-watching hot spots
- Three full-spread Chicago maps

While much of the popular content remains the same, there are key updates to several articles, a new look at Metra, and a feature and map not included in the original publication!

Trains
UPDATED SPECIAL EDITION
CHICAGO
AMERICA'S RAILROAD CAPITAL
How the busiest railroad center handles freight and passengers
NEW: Metra's bold moves
Traffic bottleneck
Essential L: Beyond the loop
Union Station, then and now

$1 OFF + FREE SHIPPING!

KALMBACH HOBBY STORE

Reserve your copy now at

KalmbachHobbyStore.com/TR20

Offer expires 8/24/2023 at 11:59 p.m. CT. Free standard shipping to U.S. addresses only. *Chicago, America's Railroad Capital* will arrive in September 2023.
Sales tax and retail delivery fee where applicable.

In this issue

August 2023
Vol. 83, No. 8

Features

COVER STORY
State focus: Railroading in South Dakota p. 14
Beyond the great faces and scenic places, South Dakota has been railroading for 150 years
Rick Mills

On the edge p. 20
The ebb and flow of life in Edgemont, S.D., a railroad town
Rick Mills

Old places, new faces p. 26
Milwaukee Road's retrenchment and the Staggers Act remade South Dakota railroading
Rick Mills

VHS memories p. 32
Preserving Dakota rails with video and still photography
Chris Laskowski

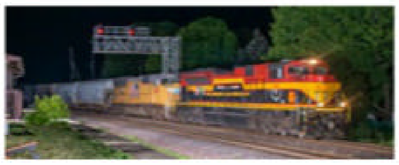
Best of *Trains*: Tomorrow's train p. 34
Traction expert William D. Middleton rides Japan's then-new Bullet Train and wonders if this is the future of railroading
William D. Middleton

In My Own Words: In the beginning ... p. 44
A Canadian National train crew befriends a 5-year-old fan
Sara Huebner

Gallery p. 54
Images of South Dakota's colorful and varied railroad scene

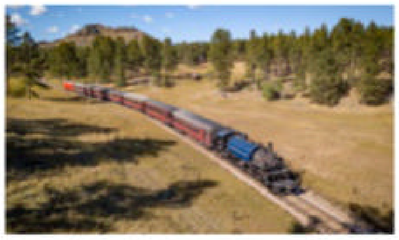
ON THE COVER:
Rapid City, Pierre & Eastern's northbound Belle Fourche Turn departs Whitewood, S.D., with 31 cars behind four units on Oct. 1, 2021. Blair E. Kooistra

In every issue



News p. 6
The recently approved merger of Canadian Pacific and Kansas City Southern is going to court

Bill Stephens p. 12
Can U.S. railroads bounce back from a dismal decade?



Travel p. 46
Riding South Dakota's steam-powered Black Hills Central

Preservation p. 48
Southern Railway No. 722 restoration begins

Trains.com

facebook.com/TrainsMagazine

twitter.com/TrainsMagazine

@trains_magazine

From the Editor

Carl Swanson
cswanson@kalmbach.com
@TrainsMagazine
@trains_magazine

With our 1,000th issue rapidly approaching, we are counting down the best articles from *Trains* past. This month, in an article originally published in April 1966, author William D. Middleton takes us aboard "Tomorrow's railroad," Japan's New Tokaido Line, home to the then-new high-speed Bullet Trains.

It's a great article, but it's also a sobering one.

Middleton writes, "… the standard of super-railroading would seem to be within the grasp of any well-built U.S. trunk line."

But apart from the Northeast Corridor, high-speed rail on the scale found in Japan (and now many other nations) has been slow to arrive on these shores. We saw the future — and turned our backs.

Editor Carl Swanson
Design Director Thomas G. Danneman
Production Editor Nastassia Putz
Senior Editor David Lassen
Associate Editor Bob Lettenberger
Editorial Associate Monica Freitag
Assistant Design Director Scott M. Krall
Illustrators Roen Kelly, Kellie Jaeger
Production Specialist Sue Hollinger-Klahn
Librarian Thomas Hoffmann

Columnists
Brian Solomon, Bill Stephens

Correspondents
Dan Cupper, Keith Fender, Steve Glischinski, Chris Guss, Scott A. Hartley, Bob Johnston, Kevin P. Keefe, David Lustig, Robert W. Scott

Founder A.C. Kalmbach, 1910-1981

TRAINS.COM
Director of Trains.com A. David Popp
Executive Producer Kent Johnson
Producer Kevin Gilliam

CUSTOMER SERVICE
phone: (877) 246-4843
Outside the U.S. and Canada: (903) 636-1125
Customer Service: customerservice@TrainsMagazine.info

For the purpose of marketing goods and services to our customers, we may make certain customer information and our customer list available to carefully screened companies that offer products and services that we believe would interest our customers. Please visit our privacy policy at www.kalmbach.com/privacy for more information. If you do not want to have your information transmitted to third party companies that offer products and services to our customers or to database cooperatives, please advise us at Kalmbach Media Data Protection Office, P.O. Box 1612, Waukesha, WI 53187-1612, email us at privacy@kalmbach.com or call us at 877-246-4843.

ADVERTISING SALES
Michael Wieloch
888-558-1544, Ext. 625
mwieloch@kalmbach.com

EDITORIAL
phone: (262) 796-8776
email: cswanson@kalmbach.com
fax: (262) 798-6468
P.O. Box 1612
Waukesha, WI 53187-1612

SELLING TRAINS MAGAZINE OR PRODUCTS IN YOUR STORE:
phone: 800-558-1544
Outside U.S. and Canada: 262-796-8776, ext. 818
email: tss@kalmbach.com
website: Retailers.Kalmbach.com

TRAINS HOME PAGE
Trains.com

KALMBACH MEDIA
Chief Executive Officer Dan Hickey
Chief Financial Officer Christine Metcalf
Senior Vice President, Consumer Marketing Nicole McGuire
Vice President, Content Stephen C. George
Vice President, Operations Brian J. Schmidt
Vice President, Human Resources Sarah A. Horner
Circulation Director Liz Runyon
Director of Digital Strategy Angela Cotey
Director of Design & Production Michael Soliday
Retention Manager Kathy Steele
Single-Copy Specialist Kim Redmond

Subscription rate: single copy: $7.99 (U.S.). Print + digital subscription rate: U.S.: 1 year $58.95. Canadian: Add $12.00 postage. Canadian price includes GST, payable in U.S. funds. All other international: Add $22.00 postage, payable in U.S. funds, drawn on a U.S. bank.
©2023 Kalmbach Media Co. Any publication, reproduction, or use without express permission in writing of any text, illustration, or photographic content in any manner is prohibited except for inclusion of brief quotations when credit is given. Title registered as trademark. TRAINS assumes no responsibility for the safe return of unsolicited photos, artwork, or manuscripts. Acceptable photos are paid for upon publication. Photos to be returned must include return postage. Feature articles are paid for upon acceptance. For information about submitting photos or articles, see Contributor Guidelines at www.Trains.com. Printed in U.S.A. All rights reserved. Member, Alliance for Audited Media.

TRAINS Magazine (issn 0041-0934, usps 529-850) is published monthly by Kalmbach Media Co., 21027 Crossroads Circle, P.O. Box 1612, Waukesha, WI, 53187-1612. Periodicals postage paid at Waukesha, Wis., and at additional offices. POSTMASTER: Please send address changes to TRAINS, P.O. Box 8520, Big Sandy, TX 75755. Canada Publication Mail Agreement #40010760.

UNION STATION
TRAVEL BY TRAIN

Destined to travel

TOURIST RAILROAD PROFILES: Ready for an adventure? Check out the "Tourist Railroad Profiles" section in "Railroads & Locomotives" on Trains.com (under the *Trains* tab). Railroad profiles and other travel-related articles reside here. So … go ahead and research the vast amount of tourist trains and preservation sites throughout the U.S. There are also event-specific articles emphasizing "Day Out with Thomas" train rides and holiday trains like "Polar Express." Some include state by state roundups of the various destinations you can visit for the experience. Not to mention, there are day trips to peruse and perhaps, try exploring yourself. It's your one-stop shop for rail travel information. — *Nastassia Putz*

Plus

Get geared up for …

FIVE MIND-BLOWING FACTS: This online-only article series presents you with fun, informational, sometimes odd and unbelievable facts about train-related topics. *Trains* Associate Editor Bob Lettenberger writes about a different topic each month. Honestly, you'll never guess what he will uncover next. From words that originally came from the railroads to nitty-gritty details about dining cars to an adoring, fictional feline icon named Chessie, it's a truly cinematic, light-hearted approach and behind-the-scenes look into railroad history. To locate any one of these well-written pieces, go to the *Trains* tab, click on the "Railroads & Locomotives" section, and scroll down to "History." Enjoy! Popcorn not included. — *NP*

RAIL PASS

HERE is your official commuter rail pass for Trains.com. Let it take you on an excursion through the mountains and into the forest of content cultivated by our train enthusiasts. Like our readers, our writers raise the bar!

TRAINS.COM BRIEFS

Big Skies & Iron Rails

Big Skies
IRON RAILS

Follow photographer and videographer **TOM DANNEMAN'S** cinematic railfanning adventures into the **AMERICAN WEST**. This series highlights stunning natural vistas and railroads, and is **EXCLUSIVELY** on Trains.com VIDEO. There are six full-length episodes posted annually (not including special episodes). Just scan the **QR CODE** to the right.

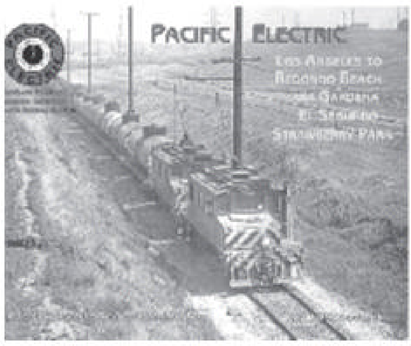
The **"ABCS OF RAILROADING"** section has it all. Where does **DISTRIBUTED POWER** go? How do **STEAM LOCOMOTIVES** work? What are **RAILROAD SIGNS** for? The list continues. Get answers to questions on **TRAINS.COM**, under the *Trains* tab.

Ron's Books
www.ronsbooks.com
P.O. BOX 714, HARRISON, NY 10528 • **ronsbooks@aol.com**
(914)967-7541 11AM to 10PM EST FAX (914)967-7492 24HR

***NEVER** a Shipping Charge within the U.S.**

Alco Light Loco Parts & General Products Catalog Mfrs' Cat Archive Book 60	35.00
Arthur Koppel Narrow Gauge Railway Materials Mfrs' Cat Archive Book 57	35.00
Battle for the Columbia River: Rise of the Oregon Steam Navigation Co	22.75
Boston & Maine Color Portfolio	36.75
Boston in Transit: Mapping the History of Public Transportation in the Hub	65.75
Brainerd Shop Dogs: A History of Northern Pacific Railroad Workers	22.75
Budd RDCs Vol 2 Manufacturers' Catalog Archive Book 55	35.00
Buses: Flexible, FM, Mack & Yellow Coach Mfrs' Catalog Archive Book 58	35.00
Canadian Pacific Power in Color Vol 4 Modern Six-Axle Road Power	58.75
Canadian Railways - Coast to Coast	40.75
Chasing Trains - Photography by Jerry Quinn Sr	40.75
Chesapeake & Ohio Logan, WV Subdivision	23.75
Chesapeake & Ohio Virginia Air Line Branch	23.75
Chesapeake & Ohio's The Chessie The Train That Was But Never Was	23.75
Chicago & Western Indiana and Belt Railroad History	44.75
Commodities by Freight Car	21.50
Delaware & Hudson Cabooses	65.75
East Penn Railroad Color Portfolio and Affiliates M&NJ & Tyburn	36.75
Electric Indiana: Rise and Fall of the World's Greatest Interurban Railway Center	36.75
First of its Kind The Buffalo Creek Railroad Vol 1 1868-1950	45.75
Frankford's Elevated Railway and its Predecessors	24.50
Ghost Rails Vol 21 Erie 2nd Sub XN-SN, NYC	60.00
High Iron & Big Boys Life & Times of a UP Steam Engineer	23.75
Industrial Brownhoist Corporation Vol 2 Cranes & Freight Handling Equipment Mfrs' Catalog Archive Book 56	35.00
Lightning Strikes Twice - O&W's Bridge Across the East Branch of the Delaware	40.75
Long Island Rail Road MU Cars Vol 2 Cars Built 1953-2020	58.75
Magor & National Railroad Cars Manufacturers' Catalog Archive Book 59	35.00
Minuteman Railroad - Boston & Maine's Lexington Branch	45.75
Norfolk Southern Railroad A Rich Railroad Heritage	24.75
O&W's Scranton Division Vol 1 A Late Arrival Shakes Things Up	55.75
Railroad Photography of Phil Hastings	36.75
Railroading in Western North Carolina	23.75
Rails Around Southern Illinois	65.75
Relics of Anthracite in Northeastern Pennsylvania Vol 2	23.75
Rio Grande's Narrow Gauge K-36 Locomotives	65.75
Santa Fe Passenger Train Compendium	80.75
Snowsheds and Train Orders Marias Pass Operations 1950s-1980s	45.75
Southern Pacific in San Francisco	75.50
Southern Pacific Steam M-4 Class Moguls SP Cyclopedia Vol 6	27.75
Spokane International Railway Modelers Notebook	27.75
Sunset Cluster: A Shortline Railroad Saga	26.75
The Princess - CP Intermodal	23.75
Train Beyond the Mountains: Journeys on the Rocky Mountaineer	26.75
Union Pacific & Predecessors	26.75
Wallkill Valley Railroad Vol 2 Forest Glen to Kingston	36.75
Wisconsin Central: Regional Railroad Powerhouse in Review	24.75

***$30.00 minimum order for free shipping. Under $30 add $5.** Send $3 for latest list. All orders U.S. funds only. NY &CT res. add sales tax. Print name, address and phone. Credit card users add card number, CVC code & expiration date. Allow 4 weeks delivery. All foreign orders sent airmail and billed accordingly. Checks payable to Ron's Books. Inquiries must include SASE. Prices subject to change. WE BUY COLLECTIONS.



PEv Ten
LA to Redond
via Gardena & ba
via Del Rey Lin
Southerly from I
Southern Four Tra
Slauson Jct.,Wat
El Segundo Lin
Delta, Strawberry Pa
Gardena, Hermosil
Redondo Beac
Clifton, Playa del R

me along on Pacific Electric's Redondo via Gardena Li
ll page, **black & white photographs,** Roster & Acti
vailable from fine railroad book stores & hobby sho
world wide - visit our website for a dealer near you.
or Call
Available mid July '23
970)761-9389
No P.O. Box address' please
$27.50
S&H
$16.0
www.montevistapublishing.co
5 Anglers Dr. Unit A- 160, Steamboat Springs, Co. 804

railroadbooks.biz
has **1,900 *plus*** new titles,
all at discount!
Domestic shipping FREE over $63

E-mail for free printable PDF list.
railroadbooks@att.net
www.railroadbooks.biz

International Service.
Book Search.

ORDERS:
U.S. (800) 554-7463
BUSINESS & INTERNATIONAL:
+01 (812) 391-2664
SEND:
$2 for paper book list.

PO Box 4, Bloomington, IN, 47402-0004 U.S.A.

Tell advertisers
you saw their ad in
Trains Magazine!

MOTOROLA SOLUTIONS
Channel Partner
MOTOROLA
We Guarantee Best Prices!
XPR7550

RAILROAD
COMMUNICATIONS
MOTOROLA TWO-WAY RADIOS
Portable • Mobile • Locomotive • Base
CP100D, 160F Scan, $465
XPR7550E, 1000F, Plus Digital, $1050

RAILSCAN
MOBILE GAIN ANTENNA
MHB5800 3db-Gain antenna,
tuned to RR band, mag. mount...$84
SCANNERS
BC125A W/Narrowband $170
BC355N W/Narrowband $170
Please add $25 for shipping

Railcom
Box 38881 • Germantown, TN 38183
901-755-1514 • www.railcom.net
email: Railcom@aol.com

Big "E" Productions
The Leader in Contemporary Train DVDs

"No More Mindless Runbys"
Our DVDs show the Whole Train

We have 306 DVDs including 34 available in Blu-ray that show the whole train. Most of our programs show all of the trains, day and night, for at least 24 hours. Expert commentary gives the train symbol, origin and destination, and explains the history and operations of the railroad or railroads in the video. Our programs are documentaries that cover contemporary railroading from 1992 to the present and were shot in locations all over the United States and Canada.

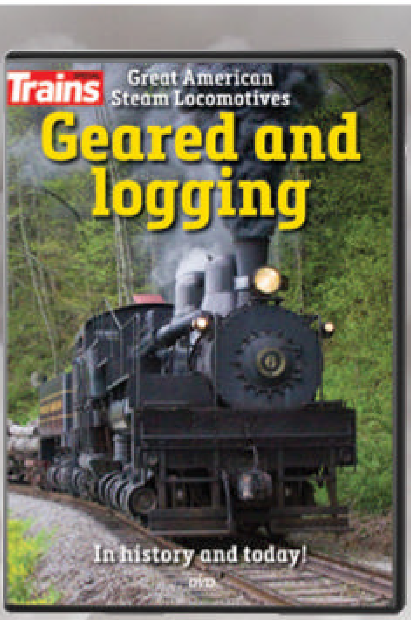
Call or write for a catalogue
Big "E" Productions
P. O. Box 75, Greenland, NH 03840
800-832-1228 or 603-430-3055, 24 hours a day.
Or visit our Website at www.trainvideos.com

SAVE 20%

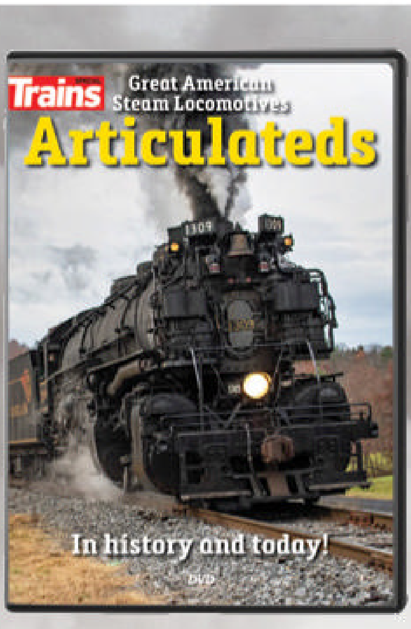
STEAM GIANTS + INDUSTRIAL HARD WORKERS

Explore the world of steam locomotives in the next two DVDs in the Great American Steam Locomotives series! You'll get a behind the scenes look at beloved giants and industrial hard workers in two all-new DVDs with a total runtime of more than 2 and a half hours. Plus, order the bundle and save 20%!

Don't miss out on these all-new steam locomotive DVDs!



GEARED AND LOGGING
With all gearing exposed and all wheels powered, these distinctive steam locomotives were designed to go into the woods or over very steep grades and ran on questionable track to bring logs or coal out to either a mill or an interchange with the main line.



ARTICULATEDS
As the largest steam locomotives ever built, they started as slow speed monsters hauling heavy trains over mountain ridges before becoming a regular feature of many of the big Class 1 railroads, handling everything from slow drag freights, to fast time freights.

KALMBACH **HOBBY STORE**

Order both DVDs today at
KalmbachHobbyStore.com/GASL
Sales tax and retail delivery fee where applicable.

P41123

▲ **Kansas City Southern’s “Saluting Our Heroes” SD70ACe leads a Union Pacific grain train past the Rochelle (Ill.) Railroad Park on July 16, 2022. UP is challenging the KCS-Canadian Pacific merger.** Nolan Wallencamp

CPKC opponents take merger fight to court

Union Pacific, Metra, Chicago suburbs all mount challenges to STB decision

OPPONENTS OF THE MERGER of Canadian Pacific and Kansas City Southern are seeking in court what they did not receive from the Surface Transportation Board.

In legal actions launched in May with the U.S. Court of Appeals for the District of Columbia Circuit, Union Pacific is asking that the STB’s approval of the CPKC merger be overturned, while Chicago commuter operator Metra seeks additional terms and mitigation that were not part of the board’s decision. A group of Chicago suburbs made a similar request in a suit filed with the U.S. Seventh Circuit in Chicago.

UP asked that the court “vacate the order … and grant such additional relief as may be necessary and appropriate.”

UP filed suit because the STB didn’t fully protect cross-border competition at the Laredo, Texas, gateway or address the potential for congestion in Houston. “In their approval they identified our concerns were bona fide. We were concerned about commercial access into Mexico. And we were concerned about overwhelming the capacity in and around Houston,” UP CEO Lance Fritz told a shippers conference in May. “And they said, ‘You’ve got a real point on both cases. But we’re not going to help you solve that.’”

Fritz praised the board for imposing an unprecedented seven-year oversight period on the merger, up from the traditional five years. But its remedy for competition concerns at Laredo is not up to the task, UP contends.

> “THE UP IS A PRODUCT OF MANY MERGERS ITSELF. HOW IS THIS MERGER DECISION PROCESS ANY DIFFERENT THAN UP-SP AND UP-CNW?
>
> — INDEPENDENT ANALYST ANTHONY B. HATCH

“Specifically what we were concerned about is in Mexico it’s possible for the CPKC to use Mexico market power to preclude reasonable commercial access by our customers either going into Mexico or Mexican customers distributing their products in the United States,” Fritz told the North American Rail Shippers conference.

UP currently handles about two-thirds of the rail traffic that moves between the U.S. and Mexico thanks to its access to all major gateways. The lion’s share of UP’s cross-border traffic is routed via the Laredo gateway, where CPKC owns the International Railway Bridge across the Rio Grande and also operates CPKC de Mexico south of the border.

UP says CPKC should be required to use a proportional mileage-based rate structure in Mexico, which would allow customers to gain transparency on rates and level the playing field. “I’ll compete all day long with them,” Fritz says. “All day long.”

The STB’s remedy was to direct customers to bring any cross-border rate and access complaints to the board. CPKC has pledged to keep all gateways open on commercially reasonable terms, a promise that the STB made a condition of the merger.

CPKC said the board made a thorough and thoughtful review of the first Class I railroad merger in two decades.

Independent analyst Anthony B. Hatch was stunned by UP's lawsuit. "I'm flabbergasted. This has not happened before, at least not in my recollection," he says.

The STB said the merger would be judged under the old review rules, not the tougher 2001 rules that require a railroad combination to enhance competition, Hatch noted. The old rules merely required that a merger not harm railroad competition.

"The UP is a product of many mergers itself," Hatch noted. "How is this merger decision process any different than UP-SP and UP-CNW?"

All three suits — by UP, Metra, and the suburban group, the Coalition to Stop CPKC — call the board's decision "arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law or supported by substantial evidence." But the Metra and coalition suits only ask that the decision be sent back to the STB "to correct its legal deficiencies."

A Metra spokesman said at the time of filing that the commuter operator was not prepared to comment further.

Metra strongly opposed the merger, contending it will negatively affect commuter operations on two lines shared with CPKC. The significant conditions it sought to mitigate those impacts were not granted.

Perhaps most notably, the commuter agency asked for dispatching control over the two shared routes. They are currently dispatched by the freight railroad in an agreement dating to the demise of the former owner, the Milwaukee Road.

In a post-merger press conference, STB Chairman Martin J. Oberman said the board did not order the change "because we do not think the data requires it or supports it, and it would cause us, in effect, to break a contract."

He said the board's plan for seven years of merger oversight, and extensive requirements to report operating metrics, will allow the STB to track the interaction between Metra and CPKC, "and if it turns out there are meaningful problems for Metra, that [dispatching] possibility, as well as the other conditions that were asked for, remain on the table." Those conditions include extensive infrastructure improvements.

A Canadian Pacific train meets an outbound Metra Milwaukee District-North train at Lake Forest, Ill., on May 1, 2021. Metra sought dispatching control over two lines shared with CPKC as a condition of the merger, but the STB did not grant that request. David Lassen

Metra's opposition reflects, among other issues, disagreement with traffic modeling used by CP and KCS in their merger application. Metra's own modeling indicated post-merger traffic growth would "break the rail system" on a single-track portion of the direct CPKC route between Minneapolis-St. Paul and Kansas City, leading trains to be rerouted through Chicago, to the detriment of the Metra Milwaukee-North and Milwaukee-West lines.

The eight communities and one county that make up the Coalition to Stop CPKC want the STB to require another environmental impact statement dealing specifically with the merger's impact on the Chicago area, along with stronger mitigation requirements for that area.

The coalition members originally sought more than $9 billion in mitigation to offset the impact of the merger's estimated increase in freight traffic. The merger application projected the number of freight trains through the communities would increase from three to 11 per day, although coalition members claim the figure could be 14 additional trains per day, based on Metra's modeling.

The coalition communities have focused on safety concerns regarding first-responder times in their fight against the merger, although they have also raised quality-of-life issues and cited potential negative impacts on development near the line CPKC shares with Metra's Milwaukee West service.

While the group eventually decreased the amount of migitation funding it sought to some $400 million, Oberman — a former Chicago alderman and Metra chairman — cited the original request in his press conference, saying it "is simply not the real world and it isn't going to happen. And it isn't warranted. … The data show that it isn't necessary."

Under the terms of the merger, mitigation for the Chicago suburbs will include CPKC funding for development of quiet zones; installation of a system that will provide first responders and drivers with advance notification of blocked crossings; and technology to minimize crossing-gate activation adjacent to Metra stations. As with Metra, Oberman said the board's extended oversight would allow the community concerns to be addressed if they develop.

Coalition members were wholly dissatisfied with those terms, with Hanover Park Mayor Rodney Craig calling the merger decision "disgusting," while Bensenville Village President Frank DeSimone said the decision ignored the group's "concerns for safety; it ignored our concerns about quality of life; and it ignored our concerns about the negative consequences for economic development in our communities." — *Bill Stephens and David Lassen*

READ THE LATEST RAIL NEWS. VISIT TRAINS.COM

NEWS BRIEFS

Brightline begins selling Orlando-Miami tickets

BRIGHTLINE began selling tickets May 17 for service between Miami and Orlando, announcing plans for 16 daily round trips. While tickets were made available for trips between Sept. 1, 2023, and Jan. 7, 2024, the exact date for the start of service has yet to be determined and could come earlier, depending on the results of testing on the 110-mph and 125-mph portions of the route. Test train at St. Lucie, Fla., David Lassen

CPKC launched its premium intermodal service between the Midwest and Mexico, the Mexico Midwest Express, or MMX, on May 11. The service linking Chicago; Kansas City; Laredo, Texas; and Monterrey and San Luis Potosi in Mexico is the first new offering of the combined railroads. The railroad subsequently ordered 1,000 new refrigerated containers for the service, more than doubling its fleet of such boxes.

Mario Péloquin was named president and CEO of **VIA RAIL CANADA**, effective June 12, becoming the fourth person to hold the position in four years. Péloquin was chief operating officer of New York's **METROPOLITAN TRANSPORTATION AUTHORITY** from November 2019 to February 2021 before returning to Canada with construction firm AECON.

BNSF RAILWAY introduced intermodal service from Houston's port to Alliance, Texas, and Denver, reflecting the continued growth of container traffic at Port Houston. The service will operate from the Barbours Cut Container Terminal in Houston to Alliance, on Tuesdays and Thursdays and to Denver on Fridays.

The gospel according to CN: keeping a schedule

Long trains are out, on-time departures are in under new operating plan

AS PART OF A RECENT INVESTOR DAY presentation, Canadian National executives dissected the long-train strategy that the railway has cast aside in favor of an operating plan where sticking to schedule is gospel.

Almost literally.

"You have this phrase around here … 'the plan is sacred.' And in this railroad in the past number of years, we moved away from this kind of a plan and we moved more toward a long-train strategy in the search of what I'm told is a different kind of efficiency," CEO Tracy Robinson says. "My belief is a scheduled plan is the right one for us."

Robinson, who became CEO on Feb. 28, 2022, explained differences between the old and new operating plans:

"CN is a single-line network. Imagine that you're an operations manager and you're in a yard. You're about to depart a train, say it's 7,000 feet, it's going to depart at 2 o'clock, 1400. If you're in a long-train model, you're looking at your inbound lineup, and you may see two, three thousand feet coming into that yard over the next number of hours that could go on that outbound train. And you want the longest train possible. So what you're going to do is delay that departure, you're going to wait until that traffic comes in, you're going to marshal it up and you're going to send out a 10,000-foot train," she says.

That works for that yard, she says, but not for the rest of the system.

"If you're running a scheduled operating model, that train departs at 2 o'clock, 1400, at 7,000 feet. It does that because that power is expected in the next terminal to be turned and put on another train. And those cars are planned for connections so they can get to the customer. ... You're optimizing to the network. And so you're going to get more asset velocity, more consistent utilization of power and crews, and more predictable service."

On-time train departures is 87% for the year to date, through May 1, up from 79% last year, while on-time arrival is 73%, up from 61% last year. The goal now is to shrink the gap between origin and destination performance.

Average train speed is up 8% for the year compared to 2019, while terminal dwell has improved by 10%. The local service commitment plan, which measures delivery of the right cars to a customer during the specified time window, is 88% so far this year compared to 80% last year.

"A critical component of the turnaround was the focus on speed and velocity versus train load and train length," says Patrick Whitehead, senior vice president of network operations. "Accumulating inventory to run big trains in our terminals was delaying traffic and gave us the appearance that we were short of people and in some cases locomotives in certain corridors. The slower network train speed was driving that perceived shortage. We just needed to speed the network up. As we sped the network up and stuck to the disciplined scheduled operating plan, we could more accurately predict the actual resources we need and plan accordingly."

CN train No. 347 nears Melville, Saskatchewan, for a crew change. CN is emphasizing on-time departures in its operations. David Maiers

Last year, as part of the scheduled plan it began implementing on April 1, CN also ended the practice of running trains over siding length. In Western Canada, CN's sidings are built to handle 12,000-foot trains.

"We started with 'Just start the trains on time. Please,'" Chief Operating Officer Ed Harris says. "That was the first step. And don't run anything longer than siding length. You go out there and run long trains and you don't fit in the siding, what happens? You start holding trains back 10, 12, 15 miles waiting for a meet. Can't do that. Every stopped train costs this company money, costs us in customer service, costs us in our relationships with our customers." — *Bill Stephens*

Five of Amtrak's new Acela trainsets are gathered at Philadelphia's Penn Coach Yard in April 2023. Continued issues have pushed the trains' debut into 2024. Gary Pancavage

Next generation of Acelas face more delays

Equipment not expected to enter service before 2024, placing more pressure on first-generation trainsets

THE DEBUT OF AMTRAK'S NEXT-GENERATION ACELA trainsets has been pushed back into 2024, the *Washington Post* has reported, as testing and computer simulations continue to find problems, most recently with the trains' wheelsets.

That means the trains will enter service at least three years late, placing increasing pressure on the existing Acela fleet that dates to 2000. *Trains* has learned four of the 20 first-generation Acela sets have been withdrawn from service, affecting equipment availability. Two New York-Washington Acela round trips were dropped from the schedule May 8; an Amtrak spokeswoman said this was "due to a need to perform additional maintenance on Acela equipment."

Alstom, which is building the 28 new trainsets, said in a statement to the *Post* that "modeling of the wheel-to-track interface is particularly complex due to age, condition, and specific characteristics of Amtrak infrastructure on the Northeast Corridor, and especially the existing tracks." The company said it has been "conducting extensive investigations" to ensure the trains will operate safely and is "confident that this extensive process will demonstrate compatibility of the latest generation of high-speed technology with existing [Amtrak] infrastructure."

Sources tell *Trains* the computer modeling designed to predict the trainsets' operating characteristics and enable them to reach maximum speeds over 150 mph were confirmed on the test track at Pueblo, Colo., but could not be verified on some Northeast Corridor sections. Track quality has been upgraded between Trenton and New Brunswick, N.J., and Amtrak already hosts legacy Acela trainsets at 150 mph over portions of right-of-way upgraded in the 1990s in Rhode Island and Massachusetts. But elsewhere, track quality varies widely.

Amtrak and Alstom announced a $2.45 billon deal to build the new equipment in 2016, with a 2021 target to begin service. But problems that caused the trains' pantograph systems to lose contact with the catenary wire at top speed required modifications that pushed the debut back a year. Another delay, to 2023, was attributed to further testing and modifications.

Amtrak told the *Post* that "further refinement of analysis, simulations and testing" are needed. Alstom said it has delivered six trainsets to the passenger operator and is preparing to deliver the seventh.

"We want our customers to experience these new trains as soon as possible, but Amtrak cannot operate them for passenger service until Alstom has completed testing and meets all safety requirements," Amtrak said in its statement to the *Post*. — *David Lassen and Bob Johnston*

Aberdeen Carolina & Western E9A debuts

Much-traveled unit joins short line's cab-unit fleet

THE ABERDEEN CAROLINA & WESTERN RAILWAY debuted rebuilt and repainted E9A No. 103 on a May 25 move from the railroad's shops in Candor, N.C., to Midland, N.C.

The 160-mile short line has assembled a collection of classic EMD cab units. The E9A was paired with the AC&W's former Norfolk Southern F9A No. 271 and F9B No. 276 on a seven-car passenger train. No. 103 was purchased in 2021 in a bankruptcy sale of equipment from former Iowa Pacific Holdings properties.

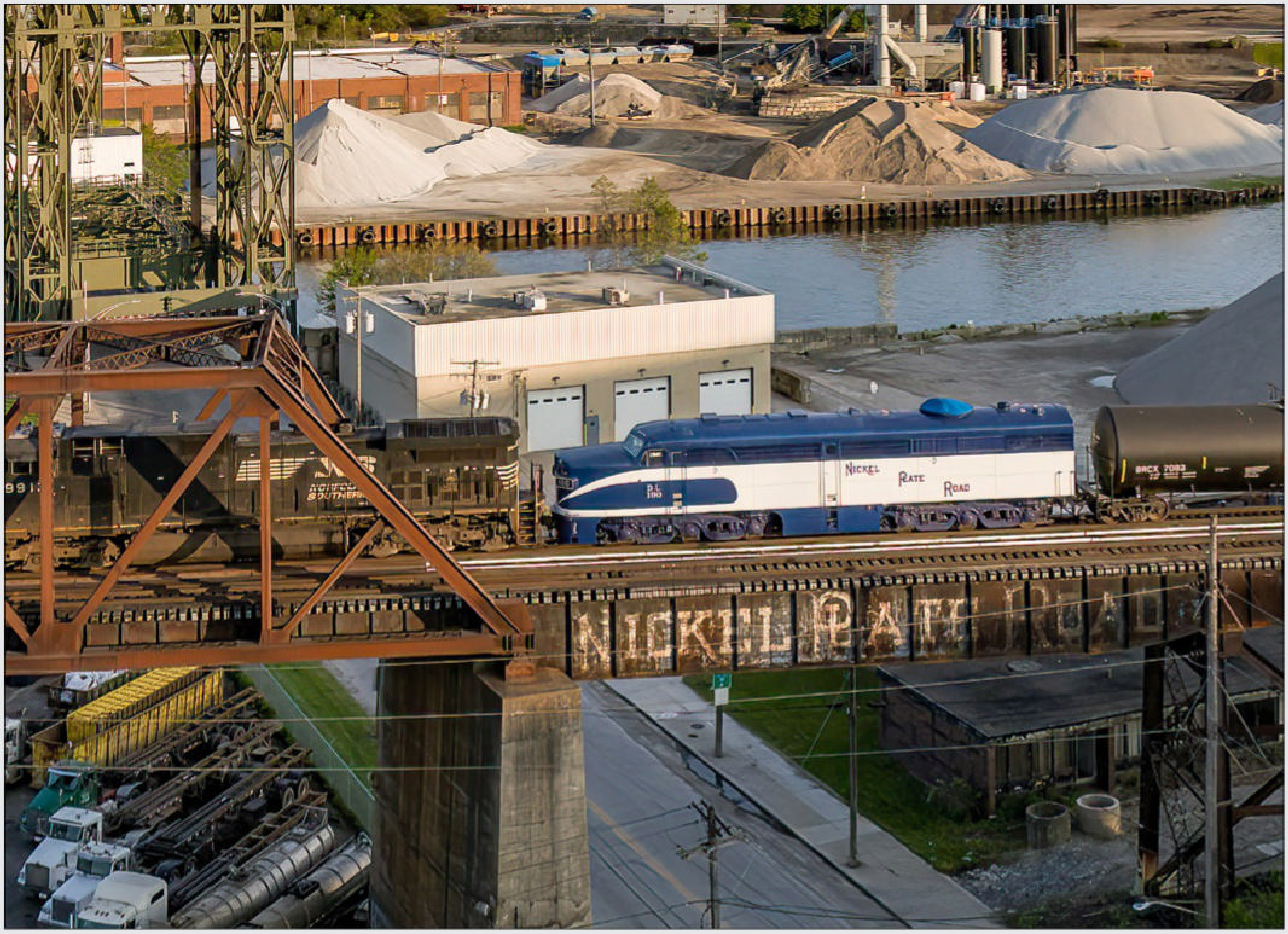
The unit was built in 1955 for Union Pacific as No. 955, and subsequently served Amtrak, the Alaska Railroad, and Wisconsin & Southern before going to Iowa Pacific's San Luis & Rio Grande.

While No. 103's twin 567C prime movers were in good condition, the unit required wiring work along with cosmetic repairs prior to being painted in AC&W's unique magenta and gold paint scheme.

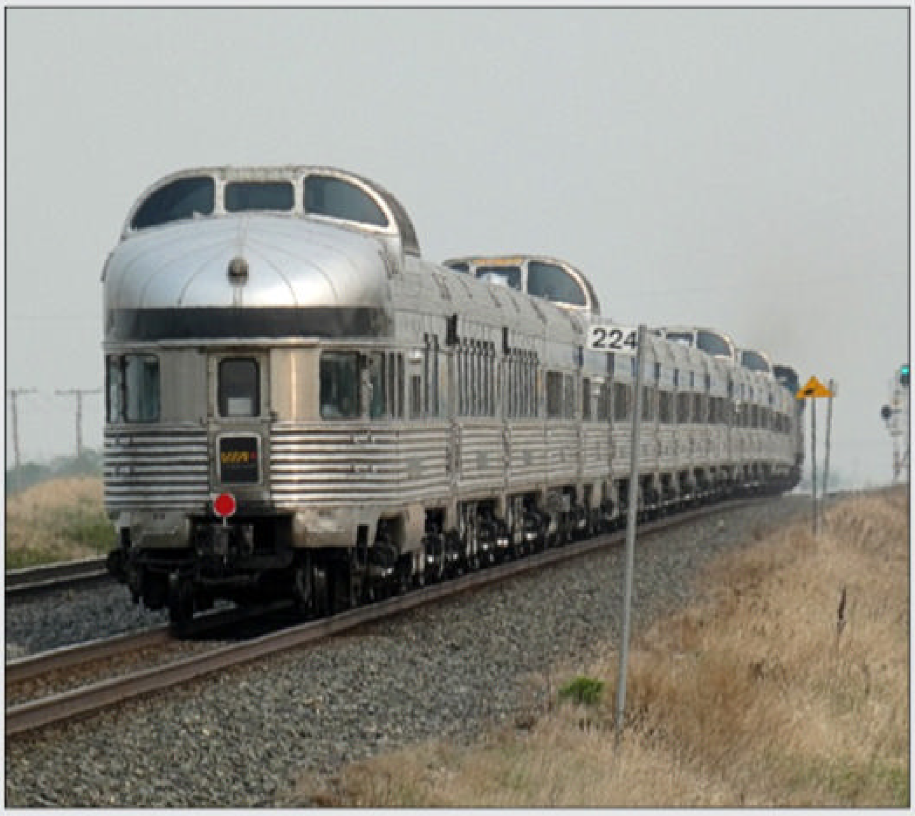
Rebuilt and freshly repainted, Aberdeen Carolina & Western E9A No. 103 — originally a Union Pacific unit — travels through Star, N.C., on May 25, 2023. Steve Smedley

AC&W owns five F9s and four E9s, according to Dale Parks, vice president of mechanical. "There are not that many E units in operation; most of them are siding queens," said Parks. "We went through her mechanically, repairing corrosion and rot in the car body. Restoration is an ongoing process. They are harder to keep going and maintain them to perform as intended. I have done more with 10 men in my shop than most large railroads. We have a lot of pride in what we do."

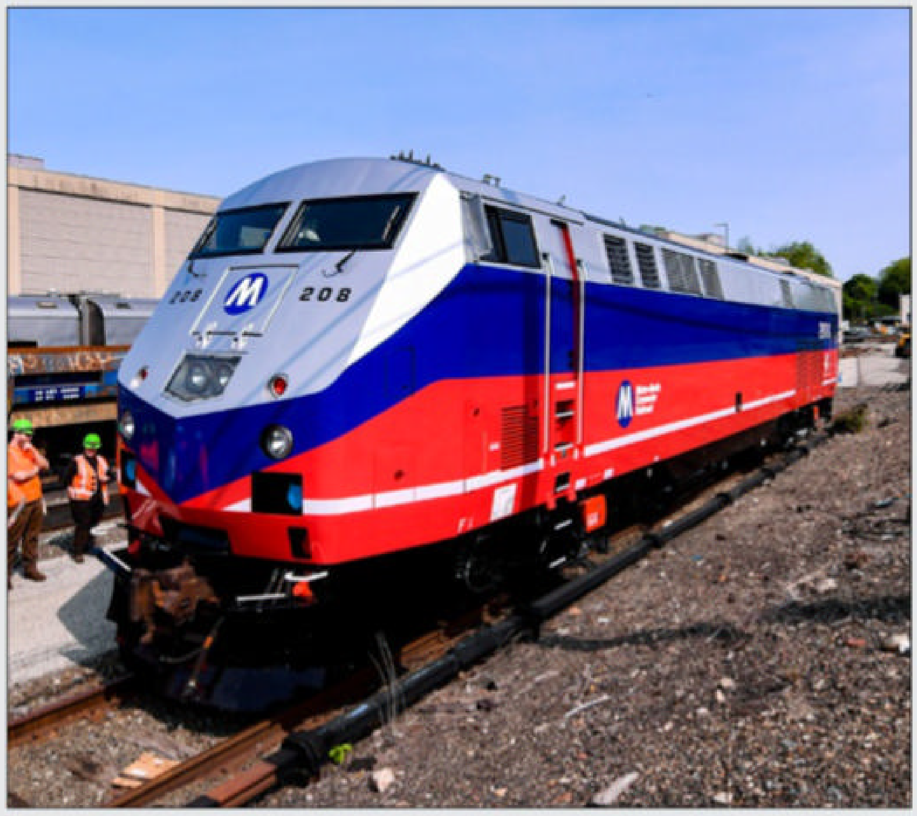
Parks said he hopes the railroad can eventually operate two sets of the classic EMD locomotives, an A-B-B-A of the F units, and an A-A-A set of the E9s. — *Steve Smedley*



GHOSTS OF THE NICKEL PLATE Making its way toward its new home with Genesee Valley Transportation and the Delaware-Lackawanna Railroad in Scranton, Pa., Alco PA Nickel Plate 190 crosses the Cuyahoga River in Cleveland on May 15, 2023. Brent Lane



BUFFERS NO MORE The first VIA Rail Canada *Canadian* to operate without buffer cars rolls through Spy Hill, Saskatchewan, on May 21, 2023. Transport Canada rescinded its order requiring the buffer cars following a series of structural tests that gutted several vintage Budd-built cars; test results were not released and the agency and VIA have never explained what prompted the buffer-car order. David Maiers



METRO-NORTH HERITAGE The first of up to five heritage locomotives planned to honor the 40th anniversary of the Metropolitan Transportation Authority's Metro-North Railroad was unveiled on May 15. P32ACDM No. 208 was wrapped in a silver, blue, and red design created in 1983 for Metro-North's FL9 locomotives. Metro-North began operation Jan. 1, 1983. MTA/Marc A. Hermann

Ride this train!

A Family Railroad Fun Guide

Trains MAGAZINE

Get the Inside Track!

- Industry news & analysis
- Detailed railroad maps
- First-hand accounts
- Exclusive web content: Railroad photos, article archives, News Wire, Hot Spots, and much more!

Subscribe at
Trains.com/subscription-plans

Follow *Trains* on Facebook!

Go to
Facebook.com/TrainsMagazine

Like our page today!

GREAT RAIL ADVENTURES ON MOUNT WASHINGTON ALL YEAR LONG!

THE MOUNT WASHINGTON COG RAILWAY

thecog.com

WEST VIRGINIA MTN RAIL ADVENTURES

THE JOURNEY CONTINUES...
WEST VIRGINIA'S NEWEST RAIL EXCURSION!

GREENBRIER EXPRESS

CASS TO DURBIN ON THE GREENBRIER EXPRESS!!

MOUNTAINRAIL.COM 304.636.9477

Can railroads come back from a dismal decade?

New management incentives tied to service and growth are encouraging

Bill Stephens
bybillstephens@gmail.com
@bybillstephens
Analysis: Trains.com

Well, this isn't a pretty picture. From 2013 to 2022 industrial production in the United States eked out 3% growth, overall economic output increased 57%, and truck tonnage grew 26%. Yet volume on the big four U.S. railroads increased by an average of just 2% for the decade — a figure that mercifully does not include coal.

What this figure tells you is that railroads are falling farther behind trucks and are becoming uncoupled from the economy. The major railroads are still earning record profits and their physical plants have never been better. But the Rail Renaissance — when railroads hit the trifecta of growing revenue, profits, and volume — is kaput.

Yes, there are pockets of growth. The two big Canadian railways grew by an average of 7.7% thanks to the traffic boom in Western Canada, where the hauls are long and the highways are few. And the late great Kansas City Southern grew 19% over the past decade due to surging cross-border U.S.-Mexico traffic. (Again, these figures exclude coal.)

But carload freight continued its long decline in the Eastern U.S., which dragged down the impact of intermodal gains. In the West, carload ticked upward, while BNSF Railway's intermodal growth was anemic and Union Pacific somehow managed to lose intermodal business.

Amid this gloom, is there a sign of hope? Can the Rail Renaissance be revived? Maybe. Here are three reasons why it could happen — and three that say it's not likely.

First, you can chalk up some of the dismal volume figures to the wildly successful formula railroads have used to reward investors: Cut costs, raise rates faster than inflation, turn away less profitable traffic, and buy back gobs of stock to juice earnings per share. Any volume growth, if it came, was gravy.

The bounce has gone out of that bungee. There's only so much cost that railroads can wring out of their operations — and there's nothing left to squeeze. So the only way to meaningfully move the earnings needle now is to gain volume.

Given the paltry volume gains since 2013, you're right to question whether railroads can put a line in the water and reel in more fish. But the publicly traded U.S. railroads' management incentive plans are now putting bait on the hook: They're offering annual bonuses that, for the first time, reward on-time performance, carload growth, and customer satisfaction. Incentives matter — and they work.

RAIL VOLUME GROWTH, 2013-2022

FIGURES DO NOT INCLUDE COAL

RAILROAD	% CHANGE
Kansas City Southern	19.2
Canadian National	8.8
Canadian Pacific	6.5
CSX Transportation	3.3
Norfolk Southern	2.6
BNSF Railway	1.9
Union Pacific	0.3

Source: Railroad annual reports and AAR data

But these service and growth incentives don't total more than 20% of executives' annual bonus packages. So you wonder if that's high enough.

Growth will depend on service. Get service right and everything else — including revenue and profits — should follow. So shouldn't incentive plans put more weight on service? And why not reward union workers for on-time performance? Absent sustained reliable and consistent service, the next decade's volume trends will look like the last. No one wants that.

Second, the new generation of CEOs grasp the challenge. Norfolk Southern, CSX Transportation, and Canadian National say they won't furlough engineers and conductors during downturns so that they can be prepared to capture volume and maintain service levels when traffic comes back. It's hard to overstate the importance of this change.

Third, there's untapped demand for rail service. Entrepreneurial short lines, even those in the Rust Belt, have proven that with the right service, shippers will use rail more. Plus, retailers and other big companies want to shift freight to rail as a way to reduce greenhouse gas emissions. This is the biggest, broadest growth opportunity the rail industry has seen in decades. But no one is going to trade the dependability of trucks for unreliable rail service, no matter how much it reduces emissions.

Which brings us to reasons to be skeptical.

The first is that railroads keep hoping that external forces — a truck driver shortage, highway congestion, fuel prices, inflation, the green movement — will push volume to rail. That's nonsense. Railroads need to pull volume off the highway by offering the right combination of price and service that will attract and keep shippers.

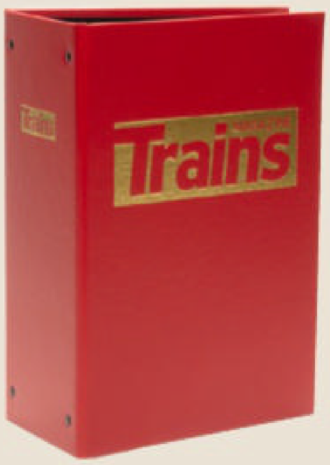
The second is that railroads haven't gone where the freight is. More and more freight moves in smaller volumes over shorter distances. Yet railroads stick to high-volume, long-distance markets.

The third and biggest reason is that railroads have been talking about improving service for decades. It hasn't happened.

But give NS, CSX, and UP credit for adding service and growth components to their management incentive plans. In the next few years the volume figures will show whether the new incentives worked as intended.

Protect Your Investment!

Trains MAGAZINE



Preserve your library of *Trains* magazines with durable hardcover binders.

$17.95 Each
Order Item No. 83159

ORDER YOURS TODAY!

Shop at
KalmbachHobbyStore.com

Trains.com
Unlimited
Membership

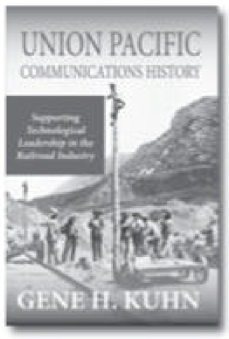
30 DAY FREE TRIAL!

Sign up for 12 months Unlimited Membership!

Only $6.99/mo, plus a FREE T-shirt!

Go to
Trains.com/TRN/
subscription-plans

Union Pacific Communications History



Supporting Technological Leadership in the Railroad Industry

Author Gene Kuhn

*Available Thru Amazon

WPRM
Western Pacific Railroad Museum
PORTOLA, CALIFORNIA

MUSEUM HOURS
Thur - Sun: April 13 thru October 1
Thur - Fri: 12 - 4 PM, Sat - Sun 10 AM - 5 PM
WEEKEND TRAIN RIDES - Memorial Day thru Labor Day

700 Western Pacific Way
Near Old Town, Portola, CA
(530) 832-4131 – www.wplives.org

RUN A LOCOMOTIVE! Call to reserve.
Runs weather permitting July thru October.

Pumpkin Trains in October - Santa Trains in December.
Check website for times and dates.

SAVE THE DATE
NOVEMBER 11, 2023
10:00 am to 4:00 pm

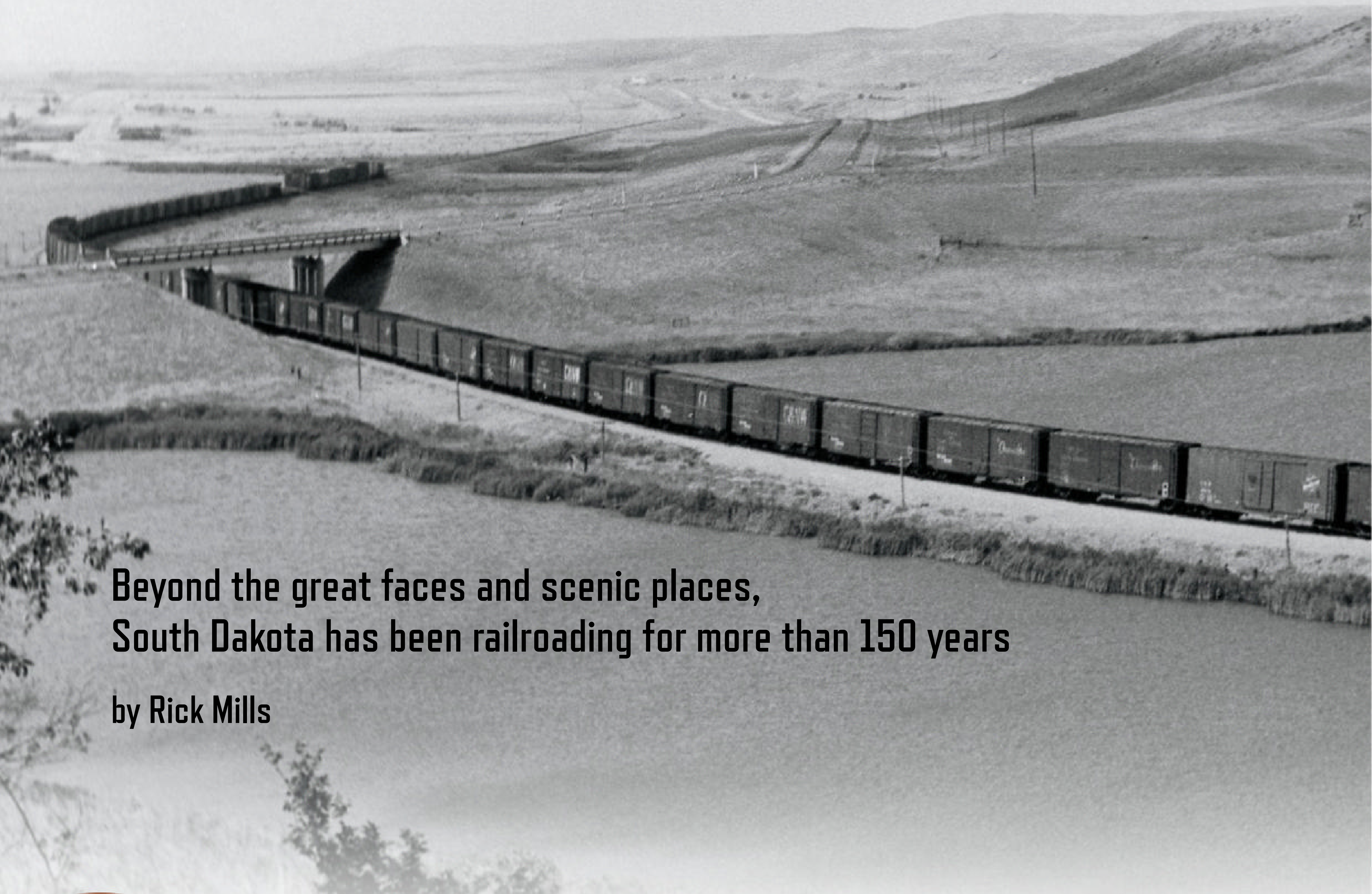
CORDELE RAIL FAN Festival

- Children's Activities
- Craft Vendors
- Model Railroad Club Displays
- SAM Shortline Shuttle Train Rides

VISIT cordele-crisp

CORDELE MAIN STREET
105 E 9th Ave
Cordele, GA 31015
229-276-2902

Railroading in SOUTH



Beyond the great faces and scenic places, South Dakota has been railroading for more than 150 years

by Rick Mills

Quick, what was the first Dakota town established by an advancing rail line?

When that first Union Pacific construction train arrived in Cheyenne, Dakota Territory, in November 1867, no witness could have predicted the extensive impact the iron road would have on the eventual state of South Dakota.

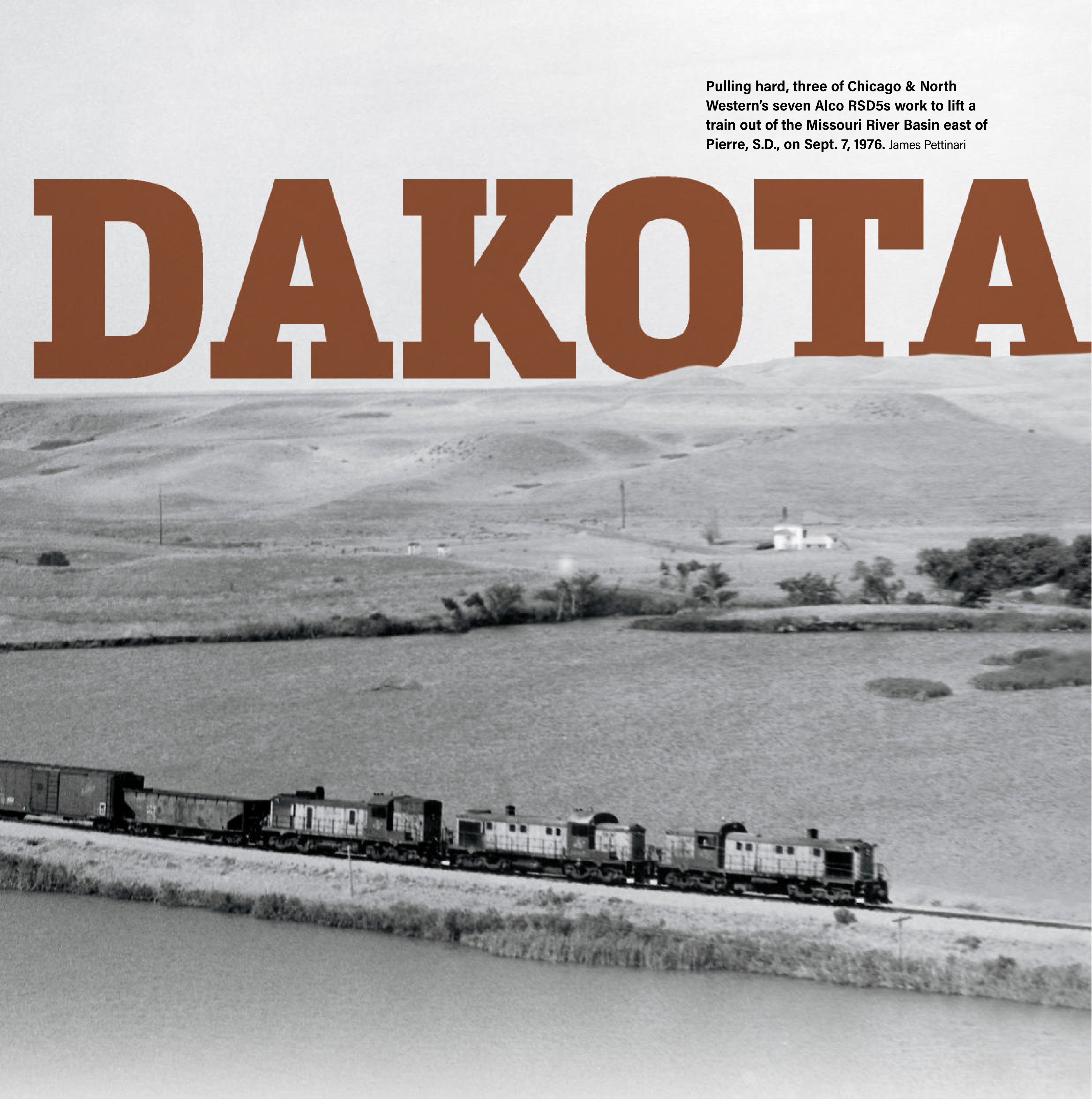
Less than two years later, a third of Dakota Territory, including Cheyenne, was ceded to the new Wyoming Territory. As the Union Pacific's transcontinental route was completed in Utah in May 1869, the remaining 150,000 square miles of Dakota began to experience the post-Civil War boom of homesteading and commercial development. Over the next 155 years, the railroad became a major catalyst in the creation of the state now known as South Dakota.

The great Dakota railroad boom

Initial rail construction, along the territory's eastern border, occurred in 1872, but soon ended as the Panic of 1873 crippled the nation's economic pursuits. The Black Hills gold rush of 1874 served to promote stage and freight wagon travel to the western part of the territory. However, the absence of a railroad link limited mining development to a collection of placer concerns.

By 1879, homesteading and agricultural development began east of the Missouri River. West of the river, lands opened by treaty agreements within the Great Sioux Reservation allowed mining, timbering, and livestock production in the Black Hills region.

DAKOTA



Pulling hard, three of Chicago & North Western's seven Alco RSD5s work to lift a train out of the Missouri River Basin east of Pierre, S.D., on Sept. 7, 1976. James Pettinari

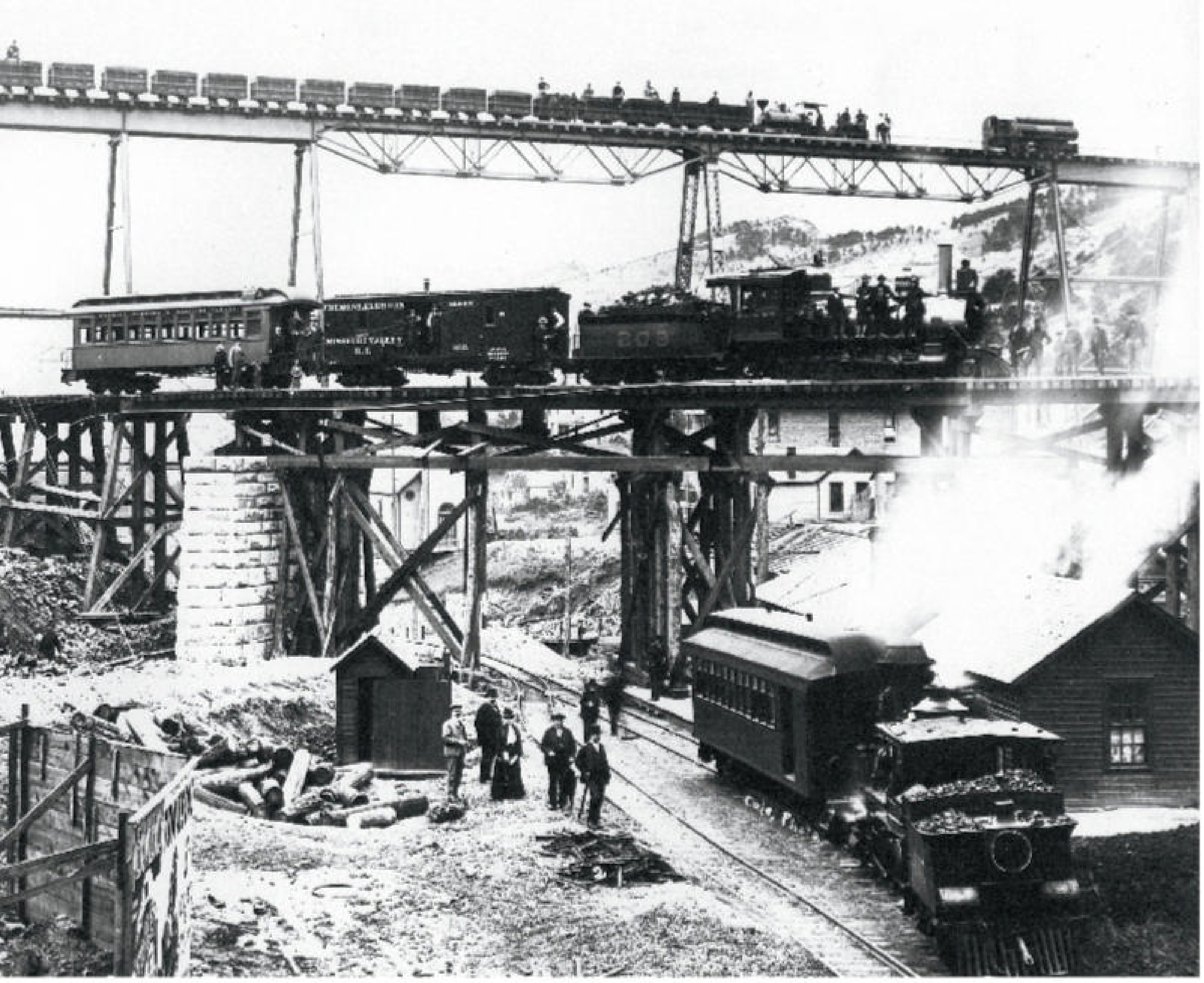
The Great Dakota Land Boom, the rapid acceleration of activity across the Northern Plains during the 1880s and 1890s, was primarily due to the efforts of enterprising railroad titans and visionaries. The likes of Gould, Hill, Hughitt, Villard, Mitchell, and Vanderbilt fronted the westward construction of their respective railroad lines, and the possibilities propagated by company advertisements of abundant land, financial prosperity, clean air, and freedom stirred citizens and immigrants to action.

Rail companies that included the Chicago, Milwaukee & St. Paul (Milwaukee Road); the Dakota Central (Chicago & North Western); the Northern Pacific; the Burlington, Cedar Rapids & Northern (Rock Island); Midland Pacific (Illinois Central); St. Paul, Minneapolis & Manitoba (Great Northern); Minneapolis & St. Louis; and the Minneapolis, St. Paul & Sault Saint Marie (Soo Line), created a web of agricultural and commercial routes east of the Missouri River. At least four systems — North Western, Milwaukee, Northern Pacific, and the Burlington — also set their sights on routes into the Black Hills region west of the Missouri River.

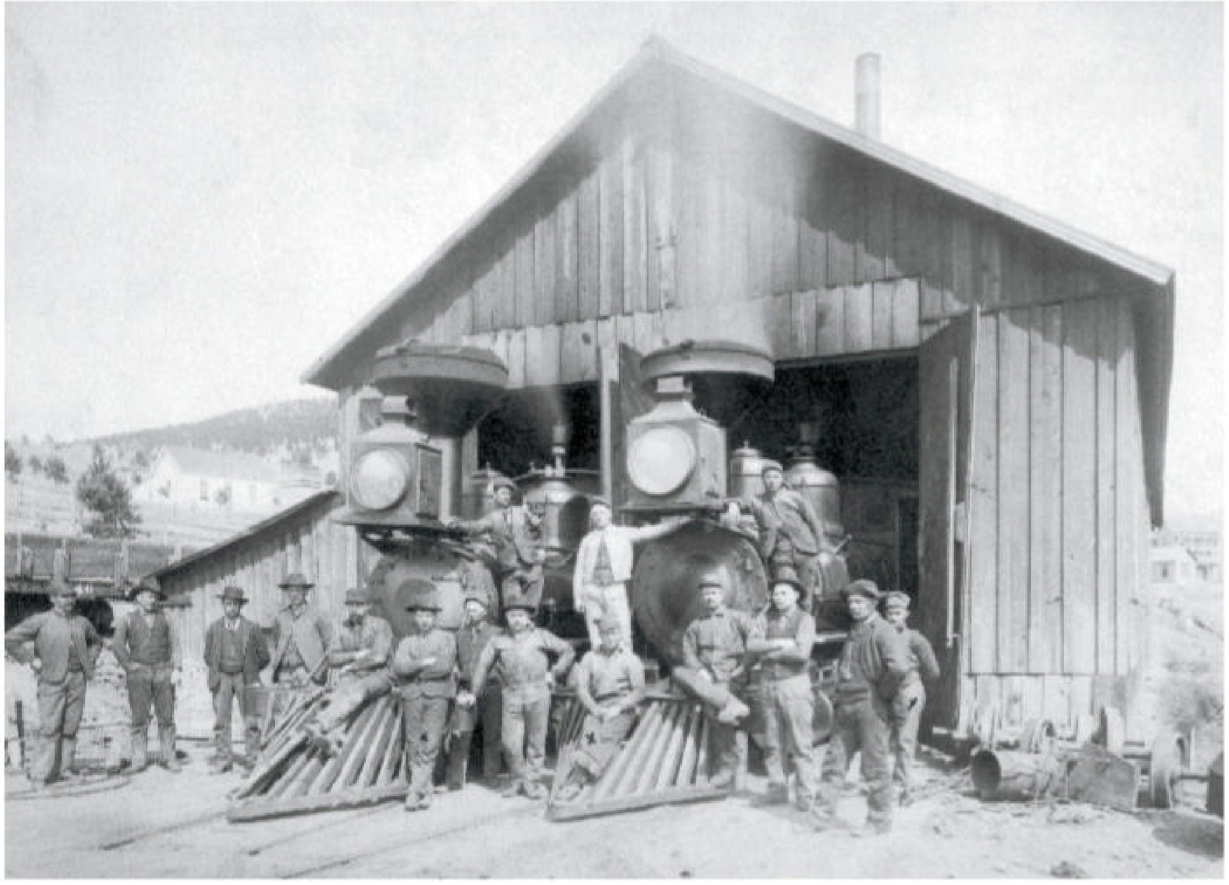
The goal was to tap the burgeoning passenger trade plus the mining, ranching, and timber resources.

The last frontier

A fiercely contested political battle to select the permanent site of the South Dakota capital resulted in a trans-state rail race in 1904. The contest between Mitchell (served by the Milwaukee), and the ulti-



From 1901, this is likely South Dakota railroading's most famous image — Lead City's three tiers of track. At top is a Homestake Mining Co. ore train. The middle track holds a narrow-gauge Consolidation and train of the Fremont, Elkhorn & Missouri Valley Railroad (C&NW). The bottom is a narrow-gauge Deadwood Central train. Three photos, South Dakota State Railroad Museum collection



Atop Poorman's Hill in Lead City, crew members and shop forces pose in front of two of the Black Hills & Fort Pierre's narrow-gauge Baldwins in the late 1890s.

mately successful Pierre (served by the North Western), pitted citizens, constituencies, and the railroads against one another. Special trains were operated to bring voters into town and give them a good look at the two cities. According to South Dakota historian Jonah "Doane" Robinson, South Dakota simply "suspended business and all went out for a grand 60-day picnic," facilitated primarily by the two rail companies.

Mitchell lost the election, and the Milwaukee Road immediately announced that it would be the first to connect east and west — beginning from the Missouri River at Chamberlain and on to the Black Hills. The North Western was placed on the defensive, with President Marvin Hewitt quickly committing to construct a line from Pierre to Rapid City with a pledge to beat the Milwaukee across the West River country. Some of the most desolate and beautiful country in the state was opened to settlement as the two roads raced across the recently ceded Lakota Sioux lands. Ultimately, the C&NW completed its line to Rapid City in early July 1907, while the Milwaukee's first train arrived two weeks later. Rapid City quickly became the primary commercial and retail center of the western part of the state.

More lands were opened north and south of the two routes, and by 1909 the Milwaukee completed its transcontinental main line west from Mobridge, S.D., to Tacoma, Wash. Branch lines were completed from the main line into the north-central part of the state.

The rapid expansion of the railroads during the 20th century's first decade was not limited to the West River country. The fledgling South Dakota Central Railway built a diagonal route from Sioux Falls to Watertown over a three-year period ending in 1907. The line reorganized after getting into financial trouble in 1916 and became a part of the Great Northern Railway, connecting to existing lines in the two cities.

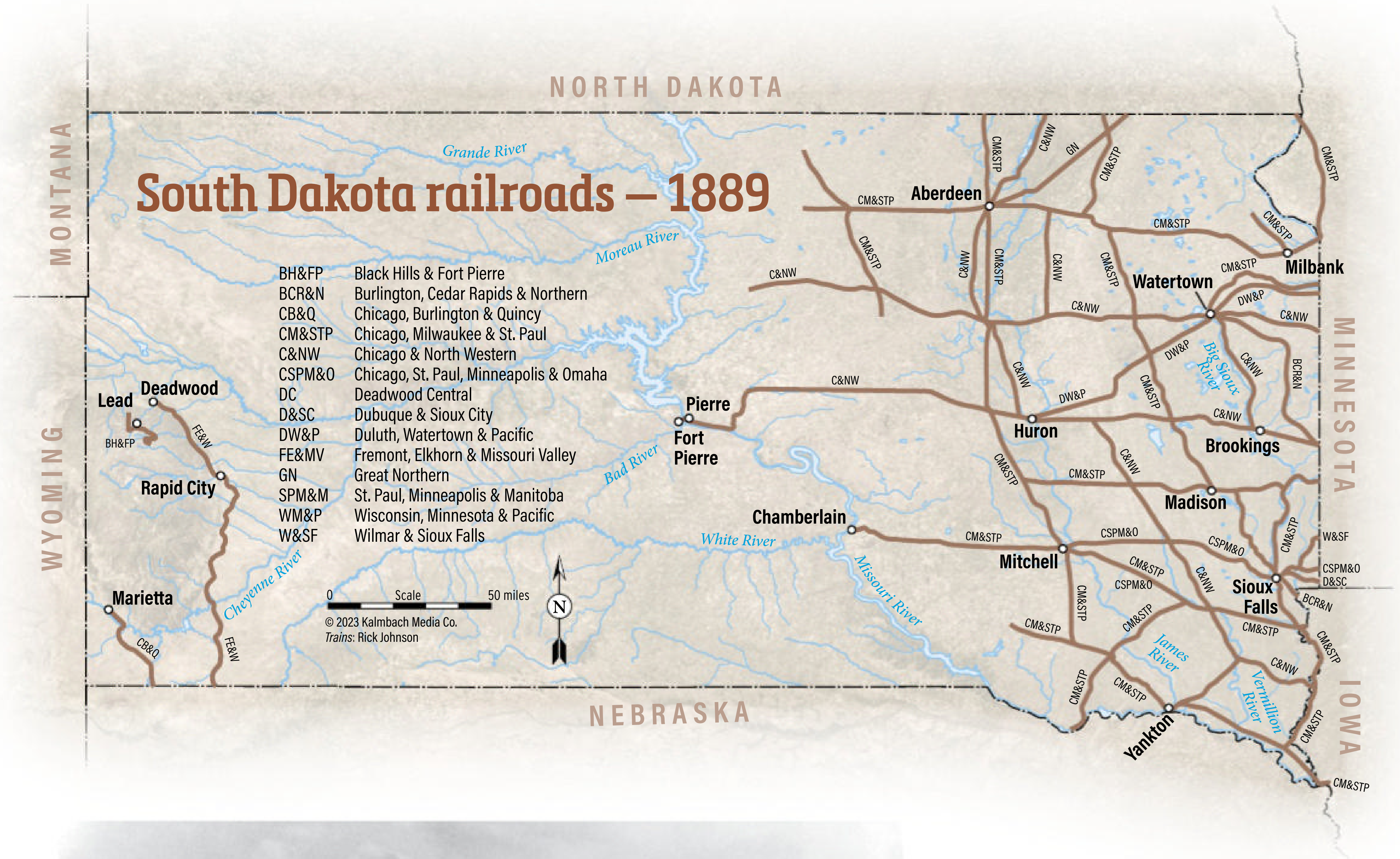
The Minneapolis & St. Louis Railway was also looking to be a part of the western expansion by driving a new route out to the Missouri River settlement of LeBeau. M&StL President Edwin Hawley envisioned his route proceeding on to the Pacific, or at least to a connection with one of the Canadian transcontinental lines. With Hawley's untimely death in 1912, the short-lived "Westward Ho" era ended abruptly on the Louie. Except for a few additions, the railroads in South Dakota reached their collective zenith in 1916.

By World War I, the remaining lands of West River country had been homesteaded or set aside as Native American reservations, while the East River region had settled into a comfortable system of farming with a scattering of rail hubs and cities to serve them. The increasing state population was primarily dependent on the agricultural economy, except in the Black Hills and West River country where agriculture co-existed with mining and timbering.

The eyes of the nation

In the early 1920s, the always-enterprising boys out in the Hills hatched a scheme that would quickly establish the foundation for the state's second-ranked form of revenue — tourism.

After World War I, the entire American farm economy suffered from low prices and overexpansion. U.S. Sen. Peter Norbeck of South Dakota proposed a railroad excursion that would give President Calvin Coolidge a view of the farming situation


South Dakota railroads — 1889
NORTH DAKOTA
MONTANA
WYOMING
NEBRASKA
MINNESOTA
IOWA
BH&FP Black Hills & Fort Pierre
BCR&N Burlington, Cedar Rapids & Northern
CB&Q Chicago, Burlington & Quincy
CM&STP Chicago, Milwaukee & St. Paul
C&NW Chicago & North Western
CSPM&O Chicago, St. Paul, Minneapolis & Omaha
DC Deadwood Central
D&SC Dubuque & Sioux City
DW&P Duluth, Watertown & Pacific
FE&MV Fremont, Elkhorn & Missouri Valley
GN Great Northern
SPM&M St. Paul, Minneapolis & Manitoba
WM&P Wisconsin, Minnesota & Pacific
W&SF Wilmar & Sioux Falls
Grande River
Moreau River
Bad River
Cheyenne River
White River
Missouri River
James River
Big Sioux River
Vermillion River
Lead
Deadwood
Rapid City
Marietta
Pierre
Fort Pierre
Chamberlain
Aberdeen
Watertown
Milbank
Huron
Brookings
Madison
Mitchell
Sioux Falls
Yankton
0 Scale 50 miles
N
© 2023 Kalmbach Media Co.
Trains: Rick Johnson

A Chicago & North Western ten-wheeler and vintage biplane compete for notoriety with the newly completed South Dakota State Capitol in Pierre in the summer of 1910.

along the right-of-way, but there was a larger agenda. Coolidge had also been invited to vacation for the summer in the Black Hills, a luxury only afforded certain chief executives at the time. Scoffing at this proposal from the Black Hills, the nation was amazed when the president accepted the invitation. During the summer of 1927, Coolidge played tourist, and the world watched. The president also assisted in the launch of a project that became the symbol of South Dakota — the Mount Rushmore National Memorial. South Dakota would never be the same.

Rationalization

The evolution of road and air travel became a factor in the survival for not only small towns, but for the railroad branch lines throughout South Dakota. Mining in the Black Hills was on the downturn, and the majority of the narrow-gauge trackage in the Hills, including the slim-gauge interurban trolley routes between Lead and Deadwood, was abandoned by 1930. This left the Hills with the Burlington's High Line from Edgemont to Deadwood, and the North Western skirting the eastern foothills on its way to Deadwood and Belle Fourche.

East River country also lost branch lines during the 1930s, as the Great Depression claimed a number of the agricultural routes. A flurry of corporate receiverships included the North Western, Rock Island, Soo Line, and the Minneapolis & St. Louis. As for the Milwaukee Road, it had entered bankruptcy in 1925 and emerged from reorganization in 1927 as the Chicago, Milwaukee, St. Paul & Pacific Railroad. A good share of secondary passenger trains were abolished or changed into mixed-train service, but the railroads were still obligated to continue service along other routes.

The relative prosperity of the post-World War II years compelled the North Western and the Milwaukee Road to introduce new trains. The Milwaukee Road's *Olympian Hiawatha,* a Chicago to Seattle/Tacoma streamliner, was launched in 1947. The sleek orange and fluted steel trains hustled over the main line through Aberdeen and Mobridge behind custom

The steam era, as well as the era of mixed trains, is rapidly ending as an eastbound Omaha/C&NW train pulls out of the Sioux Falls yard on its way to Worthington, Minn., in the early 1950s. Three photos, South Dakota State Railroad Museum collection

Neil Bagaus recorded this timeless image of the Milwaukee Road's overnight run from Aberdeen, S.D., to Minneapolis during 1969, the last year of its operation.

Fairbanks-Morse diesels. The North Western inaugurated service of the streamliner *Dakota 400* from Chicago to Huron in the spring of 1950. The *400's* route was extended to Rapid City in 1955, providing service for the tourist trade.

In 1958, a new but familiar sound echoed through the center part of the Black Hills — the distinctive whistle of a steam locomotive. The Black Hills Central Railroad, a private company in partnership with the Chicago, Burlington & Quincy, began operation of a narrow-gauge passenger train between Hill City and a siding named Oblivion on the Burlington's Keystone spur line. The tourism-focused, seasonal operation changed to a standard-gauge operation all the way to Keystone in 1964, with occasional excursions to Deadwood on the High Line branch.

By late 1960, the *Dakota 400* had ended service west of Rochester, Minn. The *Olympian Hiawatha* was terminated west of Aberdeen shortly after. Also gone from the scene in 1960 was Minneapolis & St. Louis, taken over by the Chicago & North Western. Merger talks between the North Western and Milwaukee Road continued for several years, but the two grangers never arrived at an agreement.

The final runs of South Dakota's passenger trains occurred in 1969 with the overnight service from Aberdeen to Minneapolis on the Milwaukee Road, and Burlington's Omaha-to-Billings service through southwestern South Dakota.

New horizons

In 1970, the Northern Pacific, Great Northern, and Burlington systems combined to form the Burlington Northern Railroad, the biggest national rail merger up to that date. Even though the Milwaukee Road sought inclusion in this merger through competitive interchanges and gateways, the carrier's traffic and service suffered.

Not suffering was the BN's former CB&Q secondary main in eastern Wyoming, which bisected a basin of virtually untapped coalfields. As demand soared for the relatively cheap and cleaner-burning energy source, the BN's coal bonanza was underway. Unit train after unit train rolled on the main line through Edgemont, S.D., once a sleepy cattle town.

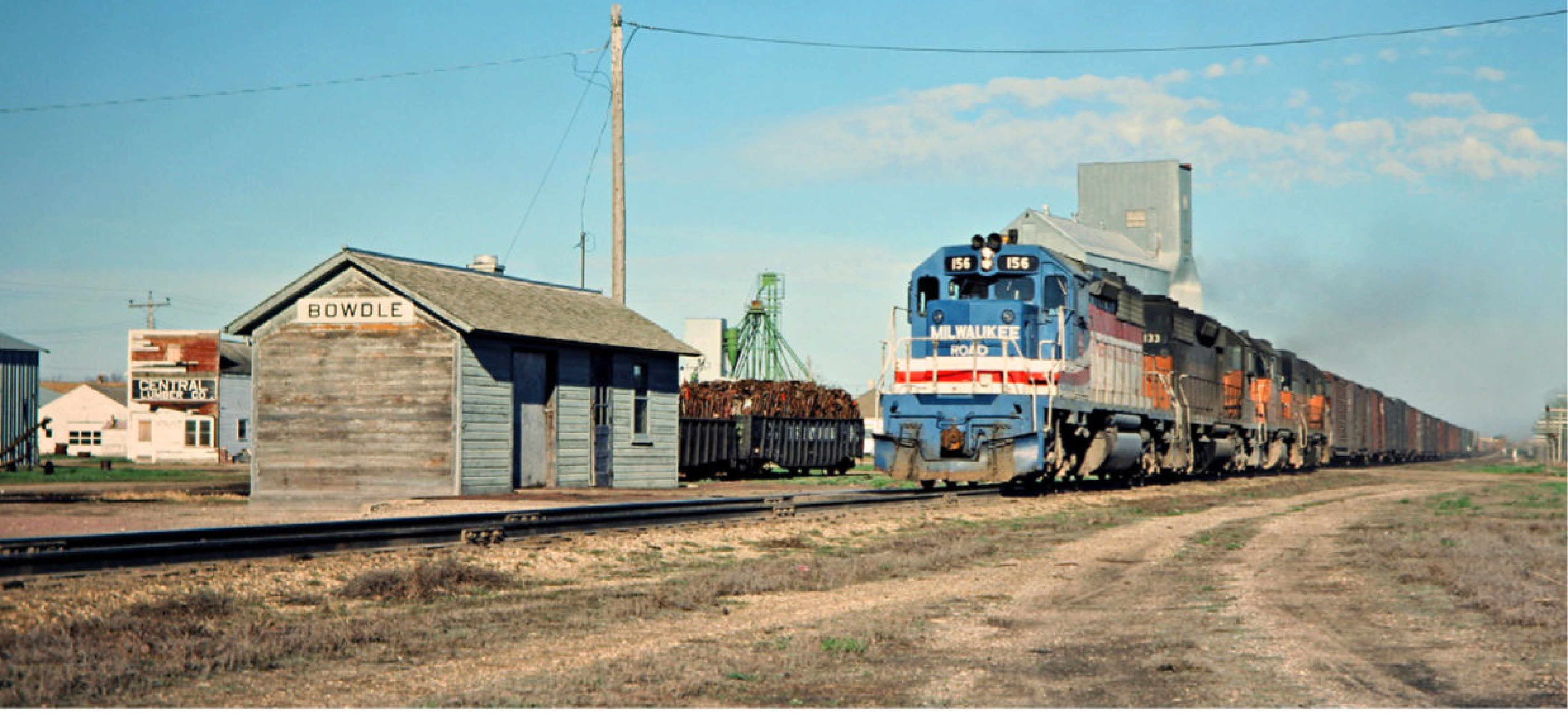
Business and political concerns over a deepening rail abandonment crisis escalated during the early 1970s. The unstable financial nature of railroads, especially the Milwaukee Road, led to the creation of the South Dakota Department of Transportation's Division of Railroads in 1975. The Department's employees and participating entities studied the needs of state shippers and railroads, and formulated strategies for continued viable freight rail services.

As public interest in tourism and historical preservation grew, local organizations established replicas of communities. South Dakota's second steam-powered passenger rail operation opened at Prairie Village, a pioneer-themed town situated along a former Milwaukee Road branch line near Madison.

On Dec. 19, 1977, the Milwaukee Road again filed for reorganization with U.S. Bankruptcy Court. Under a part of the reorganization, the railroad's trustees requested authority to abandon all lines in South Dakota, and the transcontinental main line all the way to the Pacific Coast. A modified plan was approved that spared the former main line through northern South Dakota to Miles City, Mont., and the Milbank-Sisseton, S.D., branch line. The last Milwaukee Road trains ran in the early 1980s.

A new decade

The state of railroading in 1980 found the South Dakota Department of Rail-

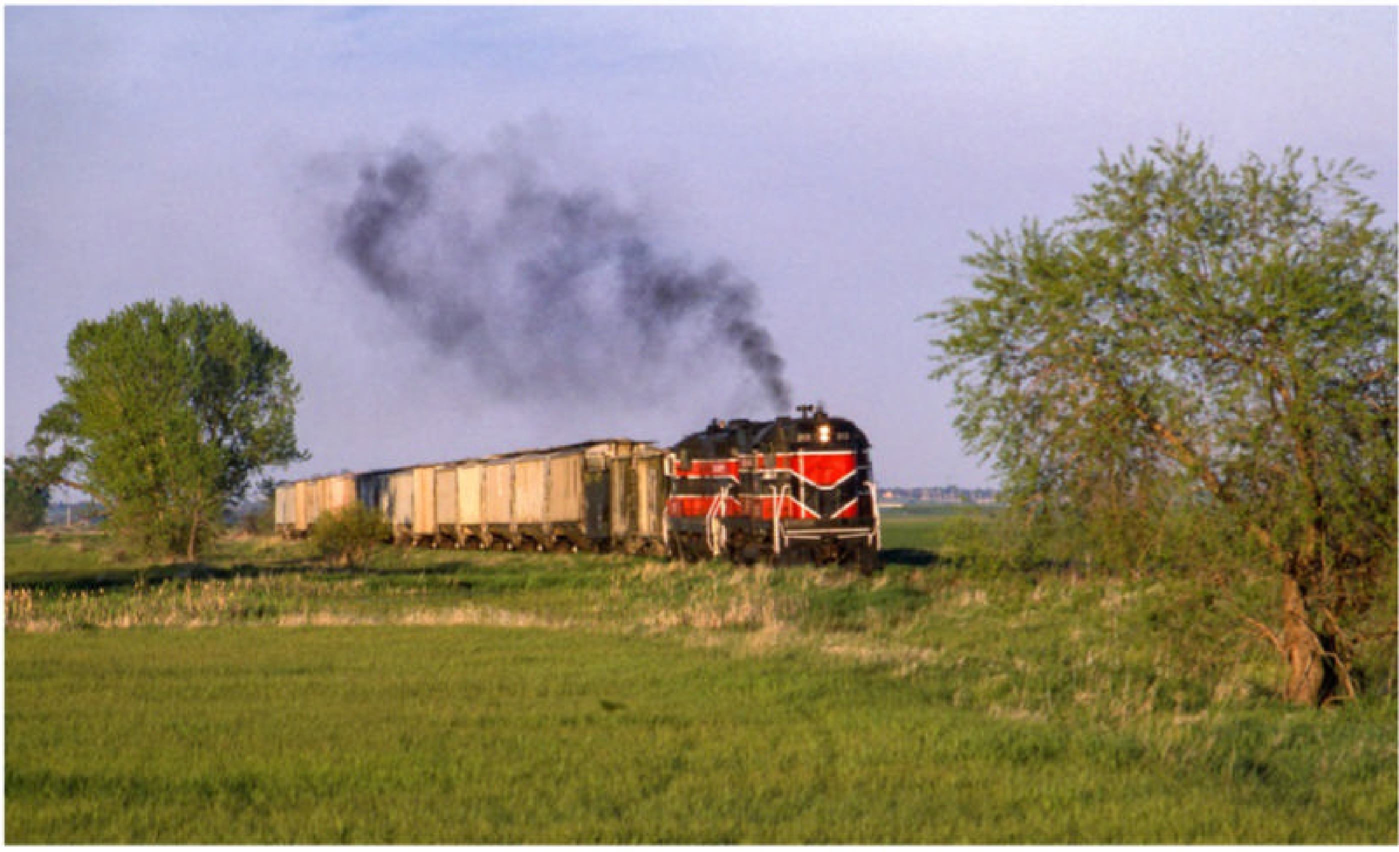


In an uncredited and undated image captured on the Milwaukee Road's transcontinental main line through northern South Dakota, Bicentennial SD40-2 No. 156 rolls westbound tonnage past the spartan lineside office at Bowdle, S.D.

roads dealing with some sobering statistics. The Milwaukee Road was gone, and nearly 50% of the operational track in South Dakota had been abandoned through that bankruptcy. The Soo Line continued to operate two marginal branches into the northern portion of the state. C&NW's trackage was at best adequate, except for its north-south line along the Black Hills. The aforementioned Burlington Northern trackage ranged from light-rail to heavy-haul ready, but only served the extreme western and eastern sections of the state.

Spurred on by crisis, the South Dakota Legislature authorized the purchase of more than 1,000 miles of track in March 1980. Also created at the time was the South Dakota Railroad Authority. This body was enabled "to plan, establish, develop, construct, purchase, enlarge, maintain, equip, and protect facilities deemed essential" to the state. A total of 834 miles of former Milwaukee Road track was purchased by the state, and another 303 miles of local option lines were purchased to save other required routes. Funding for these purchases came from a temporary 1% sales tax.

The former main line through Aberdeen was returned to service in April 1982 by the BN. Short lines began operating additional routes, including Dakota Rail from Milbank to Sisseton; the aggregate-rich D&I south from Dell Rapids to Sioux Falls and Sioux City; and the BN/Dakota Southern west from Mitchell on the former Rapid City route.



Fashioned from a line embargoed in 1980 by the Milwaukee Road, the Dakota Southern ran from Mitchell to Kadoka. This line is now part of Watco's Ringneck & Western Railroad. The Dakota Southern had an interesting mix of power including No. 213, an Alco Century 420, and No. 522, an EMD SD7, seen here. Tom Danneman

The sale of C&NW's interstate line between Rapid City, S.D., and Winona, Minn., to the new Dakota, Minnesota & Eastern Railroad in 1986 signaled the beginning of a new era. The DM&E's regional system became second only to the Burlington Northern in track-miles within South Dakota.

The North Western's branch into Sioux Falls was sold in 1988 to the fledgling Ellis & Eastern Railroad, and the North Western/Union Pacific's isolated Black Hills trackage was sold to the DM&E in 1996. Sadly, all of the original railroad companies have passed from the South Dakota scene.

However, the pioneer companies and visionary employees have been replaced by a collection of men and women on Class I, regional, and scrappy shortline railroads that continue to shepherd tonnage across South Dakota on the plains, over rivers, and in the shadow of the Black Hills. I

On the

The ebb and flow of Edgemont, a railroad town

by Rick Mills

Snowflakes the size of quarters dance in front of a locomotive headlight as a BNSF conductor checks her footing on the slick ballast, then plucks a grip off the locomotive step. Shortly, the engineer touches down and walks gingerly toward the lights of the Edgemont depot. It's a scene repeated thousands of times, day and night, in every type of weather. This time-honored ritual has continued in the southwestern corner of South Dakota since the last decade of the 19th century.

"Edgemont has always been a close Burlington town. It seemed like most all of the kids were the sons and daughters of rail[roaders], or ranchers, or a few uranium miners," says Becky Beard Kreigh, daughter of a Chicago, Burlington & Quincy/Burlington Northern conductor. "We grew up together, we played together, many of us went to school together for 12 years, and some of us are still here after marrying engineers, brakemen, and conductors. I still go out in my backyard and look down to the tracks when I hear a train coming into town."

With a population totaling a mere 725 souls as of the 2020 census, Edgemont has weathered the rains, snows, droughts, and economic waves along with many other communities on the Northern Plains. It has been aided by three constants: faith in its efforts, a fierce stubbornness of its residents, and "the Burlington."

Construction of the Burlington & Missouri River Railroad of Nebraska advanced through the Sandhills of Nebraska in the late 1880s. As a subsidiary of the Chicago, Burlington & Quincy system, the B&MR was focused on two objectives: a connection with the Northern Pacific Railway in southern Montana, and to tap the mining camps, coal mines, and timber resources in the Black Hills of western Dakota.

As South Dakota was legislated into being as the 40th state in November 1889, company track surveyors and grading crews reached the north bank of the Cheyenne River.

At this point, the surveyors' plan was to build a station at a location named

Edge

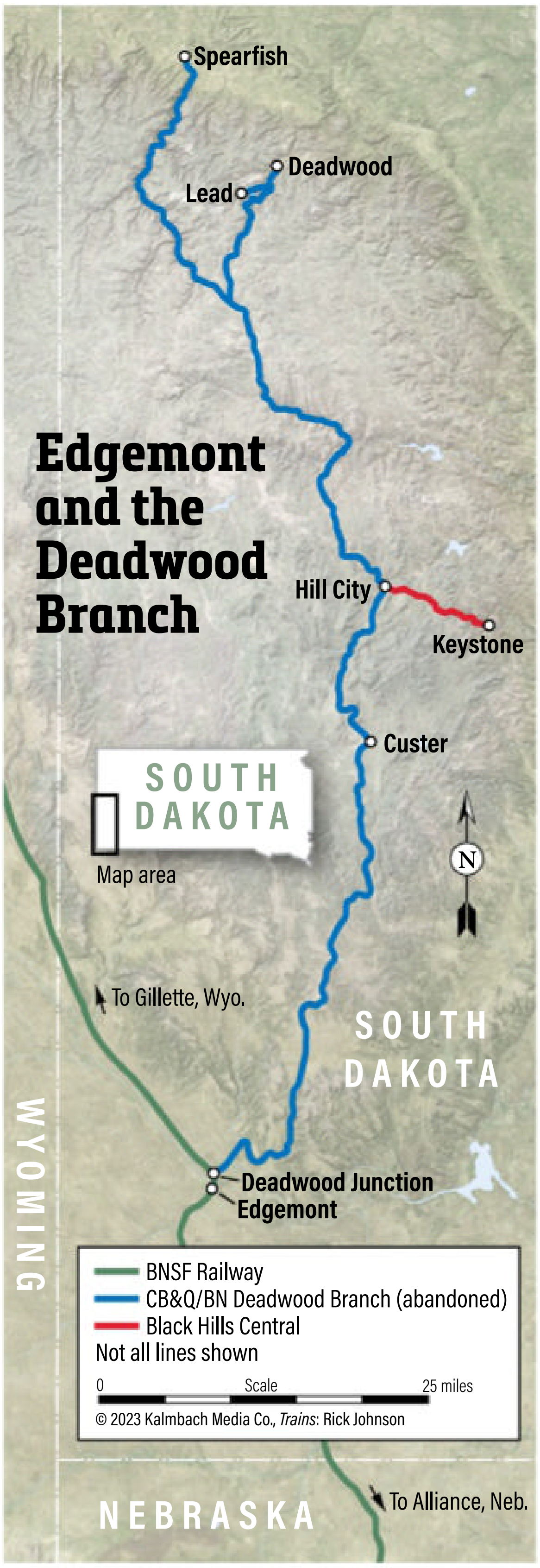
Above, two CB&Q Baldwin 2-10-2s, Nos. 6154 and 6109, leave Edgemont with 67 cars of bananas en route to the Pacific Northwest. At right, BNSF's Black Hills Subdivision is more than coal: two intermodal trains meet as they cross the Cheyenne River just north of Edgemont. Above, Gilbert B. Taylor; right, Rick Mills

Dudley (for property owner Judge George Dudley), home of a stage stop, general store, and sawmill. The railroad planned a depot, roundhouse, locomotive servicing facilities, stock pens, and a freight yard. A wye track would diverge from the main line and access a branch to run through the center of the Black Hills range and on to the bustling mining cities of Deadwood and Lead.

Veteran surveyors and rail workers noticed something disturbing about the site, however: driftwood had obviously washed down in previous high-water events on the Cheyenne River. Upon further study

Edgemont did not quite live up to its original promotion as "the new Denver of the Northern Plains." The railroad's facilities are dominant in this photo from the town's infancy in the early 20th century. South Dakota State Railroad Museum collection

In an undated photo, Burlington train No. 42, bound from Omaha, Neb., for Billings, Mont., pauses in Edgemont as train No. 141 for Deadwood, S.D., waits farther down the platform. Passenger service to Deadwood ended in 1949; the Billings train lasted until 1969. A.C. Wislisen



© 2023 Kalmbach Media Co., *Trains*: Rick Johnson

(and finding a better land price), the railroad decided to move its division point and facilities to the higher south side of the river. So a new terminal and community were born, with the town given the name Edgemont.

Surveyors, graders, trestle, and track crews advanced north and northwest from Edgemont. At Dudley, the Deadwood Junction wye was established. The main line soon crossed the Wyoming border, and the Edgemont yard filled with trainloads of men, animals, and materials destined for use on the main and the Black Hills branch.

Construction on the Deadwood Branch, more commonly referred to by train crews as the High Line, began in earnest in spring 1890. By this time, the main line had reached the settlement of Newcastle, which also became a junction, with a branch to a nearby bituminous coal mine at Cambria.

Hurrying to reach Deadwood

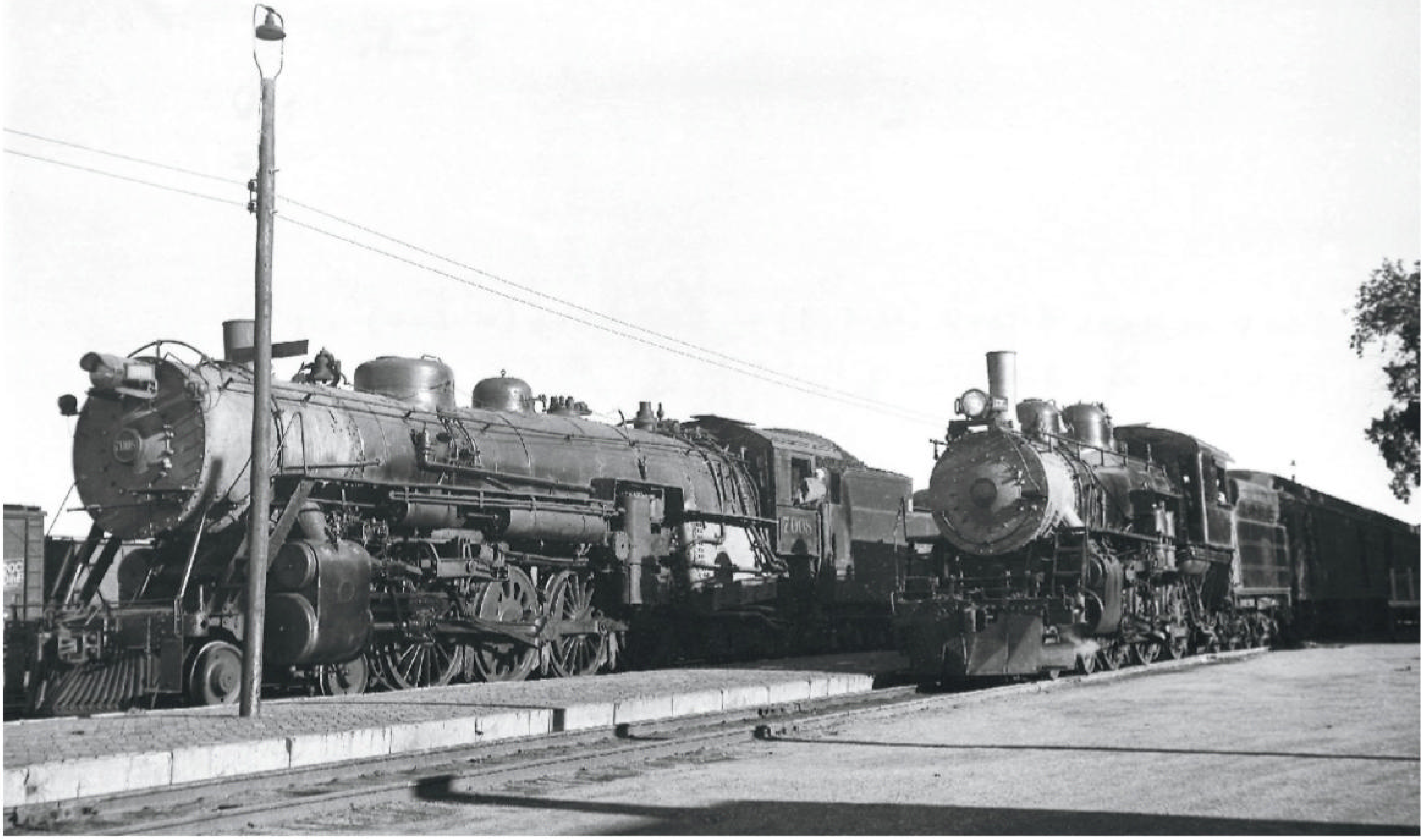
Construction crews from other subsidiaries of the Burlington, along with specialty contractors, worked at a feverish pace to complete the 110-mile Deadwood Branch. An abundance of hard-rock cuts, timber trestles, and four tunnels were required on the Deadwood line, which was completed in January 1891, a span of just over 15 months. The mainline route into Wyoming was completed through the new community of Gillette and on to a connection with the Northern Pacific at Billings, Mont., in 1894.

By the time the Burlington & Missouri River, as well as its construction subsidiary Grand Island & Wyoming Central, were formally merged into the Chicago, Burlington & Quincy in 1904, Edgemont was a busy station and yard. Dominating the east side of town were a 14-stall brick roundhouse, coaling tower, water station, and 10-track yard, as well as a two-story depot and a smartly appointed two-story railroad hotel, complete with a hot-water fountain.

Several hundred employees representing various crafts called Edgemont home, and created a proverbial melting pot of families and traditions. Early on, the local sports teams were dubbed the "Moguls," a common designation for 2-6-0 locomotives.

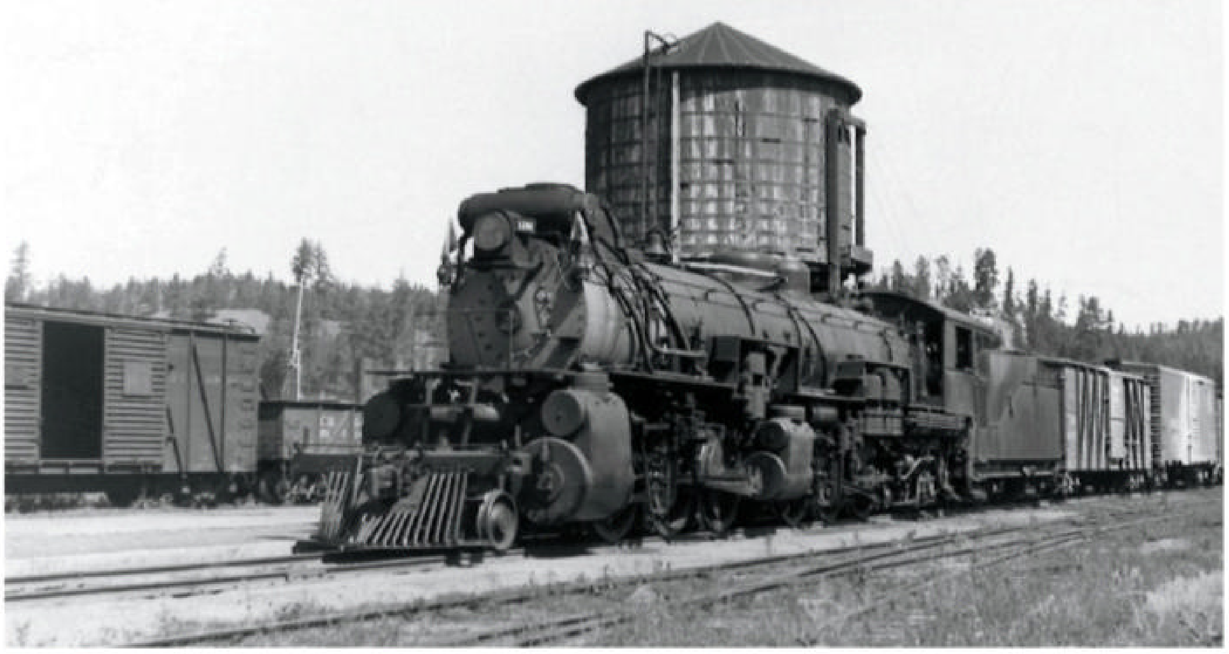
After the Burlington's connection was established with the Northern Pacific, multiple passenger trains called on Edgemont daily: trains from Omaha, Kansas City, and Denver to Billings, as well as two daily trains between Edgemont and Deadwood. As required, passenger extras between Edgemont and Hot Springs served the area's warm-water springs and tourist resorts.

Freight operations, meanwhile, saw mainline trains, cattle and sheep trains in



Burlington No. 7008, a Baldwin 4-8-2 built in 1925, and Colorado & Southern No. 330, a 4-6-0 built by Brooks in 1907 that remained active until 1950, meet at Edgemont on July 1, 1947. The 4-6-0s were the standard power for the passenger service to Deadwood. J. Conant, J.C. Seacrest collection

season, and tonnage on the High Line keep yard crews busy around the clock. Daily freights ran to Deadwood, and extra freights served the branch lines to Hot Springs and Keystone as needed. Local standard-and-narrow-gauge way freights in the Northern Black Hills were operated out of the Englewood yard as needed. Two tracks in the Edgemont roundhouse were converted to dual gauge, in the event that narrow-gauge locomotives or cars from the mining district needed service in a larger facility than those in Lead, Deadwood, or Englewood.



The Burlington had 10 of these T2 class 2-6-6-2s built by Baldwin in 1910. The T2s, among only a handful of CB&Q articulated locomotives, were assigned to Edgemont-Deadwood service. One of them, No. 4106, is shown at the Hill City water tower in this undated photo. C.T. Steeb

Home to a variety of power

In addition to the early 4-4-0 steamers, 2-6-0, 2-8-0, 4-6-0, and 10 2-6-6-2 articulated locomotives were assigned to the Alliance Division, specifically to operate out of Edgemont on the Deadwood line. These large locomotives ("the Mallets"), were known for their pulling power, and their functionality on tight curves made them ideal for service on the High Line.

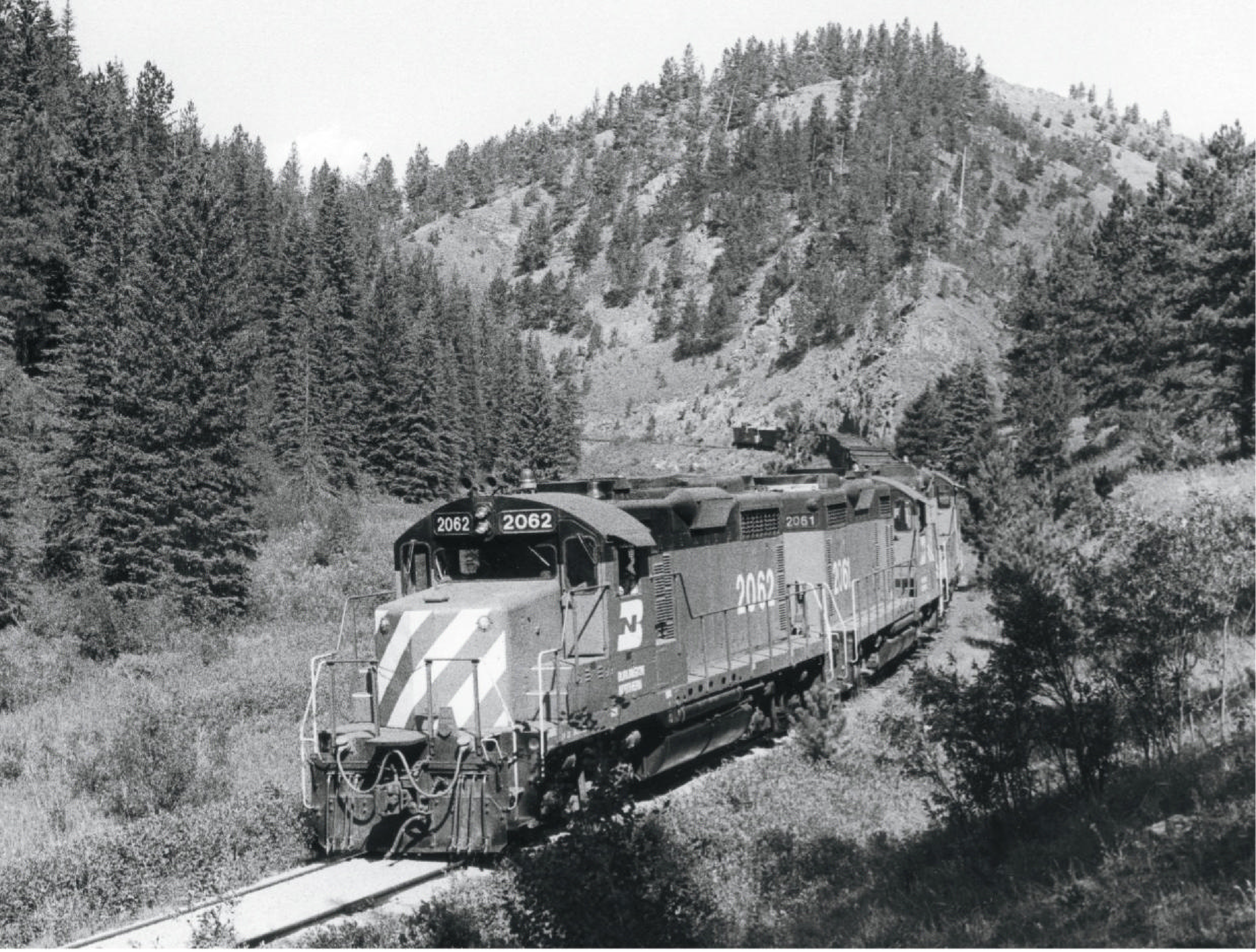
Operations through Edgemont during the 1930s and prior to World War II declined noticeably. Passenger service from Nebraska to Billings sometimes was reduced to gas-electric motor cars and coaches. In-season service from Midwest and eastern connections on the main to Yellowstone, Glacier Park, and other regional sites garnered classic western monikers including the *Adventureland* and *General Custer*.

Traffic increased dramatically upon the nation's entrance into World War II. In 1944, the U.S. Army's Camp Igloo was established southwest of Edgemont to store munitions in a series of bunkers across the semi-arid landscape. Thousands of men, women, and their families came to call the Igloo and Provo areas of Fall River County their home, and Edgemont experienced a boom as the closest "town."

On the main line of the Alliance and Sheridan divisions, most of the Burlington's steam classes were pressed into freight and passenger service.

The high plains were also a fair test for the Burlington's first diesel locomotives. Early sets of General Motor's Electro-Motive Division F3, and F7 units, known as "Graybacks," quickly supplanted the steamers in the late 1940s and early 1950s. They were followed by four-axle EMD GP7 and GP9 units, then by six-axle SD7 and SD9 workhorses.

Passenger service on the main transitioned to EMD E units after World War II, while the last High Line "varnish" ended service in September 1949 behind venerable 4-6-0s, which held those assignments for the better part of four decades.



One of the last trains to run the full length of the Deadwood Branch from Edgemont is shown at Rochford, S.D., at 10:55 a.m. on Sept. 3, 1983, on its southbound trip. GP20 No. 2062 leads the three-unit locomotive consist. Gary Larson

Edgemont's population in 1900 was only 479. However, in 1920, it had grown to 1,250. The numbers then declined slightly to about 1,150 by 1950, but in 1960, the population grew to 1,700 due to the expansion of the region's uranium mining and processing. That boom ran from the late 1940s until it faltered in the mid-1960s.

The last passenger trains to serve Edgemont, Omaha-Billings Nos. 42-43, made their final station stops in August 1969. Another generation of locomotives took charge of the freight tonnage, with EMD GP20, GP30, and higher-horsepower SD40 and SD45 models joined by General Electric U25B, U25C, U23C, and U28B units.

The Burlington and partner Northern Pacific began delivering solid unit trains of coal to Midwestern power utilities in the late 1960s. The basin containing low-sulfur Wyoming coal was perfectly positioned along the Burlington's route in Wyoming. The success of the unit-train concept made Edgemont a critical link in the coal corridor from Wyoming to the Midwest, South, and Southeast.

The coal boom arrives

"Growing up here on the Alliance Division, the Q [Burlington] family looked out for one another," recalls retired BN/BNSF signal maintainer Bill Kreutzer. Changes became the norm. New rules, new demands, new policies, and new personalities … but Edgemont always "held tough", said Kreutzer's wife Jill.

Edgemont was poised for its biggest rail boom since its creation, as the venerable Burlington became a part of the Burlington Northern merger in 1970.

A modest five to seven crew pools called Edgemont home at the time of the merger, but that figure rapidly rose. The relatively quiet secondary line through Edgemont became the busiest main line on the BN system by 1980, and escalated into the early 2000s when as many as 74 turn crews were based there. Consists of new SD40-2s, U30Cs and C30-7s ruled from the early 1970s until newer power arrived in the mid-1990s, including EMD SD60s and multiple versions of General Electric six-axle locomotives (in both AC and DC traction-motor configurations).

Entirely new fleets of high-capacity hoppers replaced older equipment to handle the hundreds of trains required by the mines and utility corporations. During the coal boom's heyday in the late 1990s, Edgemont occasionally registered more than 100 trains per day.

The "High Line" branch from Deadwood to Custer was abandoned in 1983, and from milepost 3 to Custer in 1986. The remaining six stalls of the Edgemont roundhouse were torn down in 1986. A well-coordinated state and national effort led to the creation of the Burlington Route/George S. Mickelson Trail on the former right-of-way path to Deadwood in 1989 — one of the longest national Rails-to-Trails conversions to date.

As of early 2023, Edgemont remains

A trio of Burlington Northern EMD SD70MACs departs Edgemont with a loaded coal train on July 5, 1996. Afternoon clouds are building in the heat of the day, signaling a possibility of thunderstorms on the horizon. Mike Danneman

home for nearly 50 pool crews. Crews change for trains operating north from Alliance, Neb., and for Edgemont-based crews, who run to a number of locations in Wyoming: Gillette, the staging yard at Donkey Creek, and various Powder River Basin mines. A mix of coal loads, returning empty coal hopper sets, grain loads and empties, mixed freights, locals, and intermodal trains now use the Black Hills subdivision route during any given 24-hour period. And, for hikers and bikers, Edgemont serves as the southern trailhead of the 110-mile George S. Mickelson Rails-to-Trails route over the former Burlington line to Deadwood.

Today, visitors can still visit the park featuring the city's famous bandstand — albeit not as grandiose as the day in 1903 when Teddy Roosevelt spoke to the gathered cowboys and citizenry of his Dakota ranching memories. Nor does one hear any steam whistles these days, although the air horns of high-horsepower diesels and the rumbling of mile-long trains continue to stir the Cheyenne River valley.

And, yes, the "Moguls" at the school district still compete on the hardwood, and pursue their studies as trains roll into and accelerate out of Edgemont to other points on the Burlington, err, BNSF. I

More than a quarter century after the photo above, another SD70MAC, No. 9650, still wears its BN "Grinstein green" paint as it leads a loaded coal train eastbound near the former U.S. Army ordnance depot at Igloo in February 2023. Rick Mills

Milwaukee retrenchment, Staggers Act remade South Dakota railroading

by Rick Mills

OLD PLACES, NEW FACES

An eastbound Rapid City, Pierre & Eastern train waits at Wall, S.D., siding after leaving one unit for a westbound train on Oct. 2, 2021. Blair Kooistra

The introduction of railroading to the Northern Plains in the late 19th century produced profound cultural, political, and economic change. A century later, railroading faced a revolution of its own, set in motion in part by the Staggers Rail Act of 1980. A combination of legislation, regulation, and business-model changes allowed railroads to reinvent themselves. This revolution was never more obvious than with changes in railroads serving South Dakota.

BREAKING UP THE MILWAUKEE

South Dakota's railroad map changed overnight upon the Milwaukee Road's bankruptcy and retrenchment in 1980. Abandoned lines left shippers without a method to transport commodities to long-established and expanding foreign markets.

With the state's purchase of more than 1,000 miles of former Milwaukee trackage and facilities in 1981, the Burlington Northern, once the primary competitor of the Milwaukee, assumed operation and ownership of many of the lines from South Dakota. Milwaukee's main line from Ortonville, Minn., to Terry, Mont., was transferred to BN in 1991, while the Core System (serving Aberdeen, Mitchell, Canton, and Sioux Falls) was leased, and then sold, to BN successor BNSF in November 2005.

The trackage that remained in operation became a strong economic tool for change in the following decades.

3026
3026
2
9

Straddling the South Dakota-Iowa border, D&I Railroad train MSCDR 11 crosses the Big Sioux River on the former Milwaukee Road Sioux Valley Line on June 14, 2021. Matt Krause

RISE OF THE REGIONALS

By 1980, the L.G. Everist Co. had been shipping aggregates on the Milwaukee Road from its quarries, sand pits, and operations in Dell Rapids and Sioux Falls, S.D., as well as in Hawarden, Iowa, for decades.

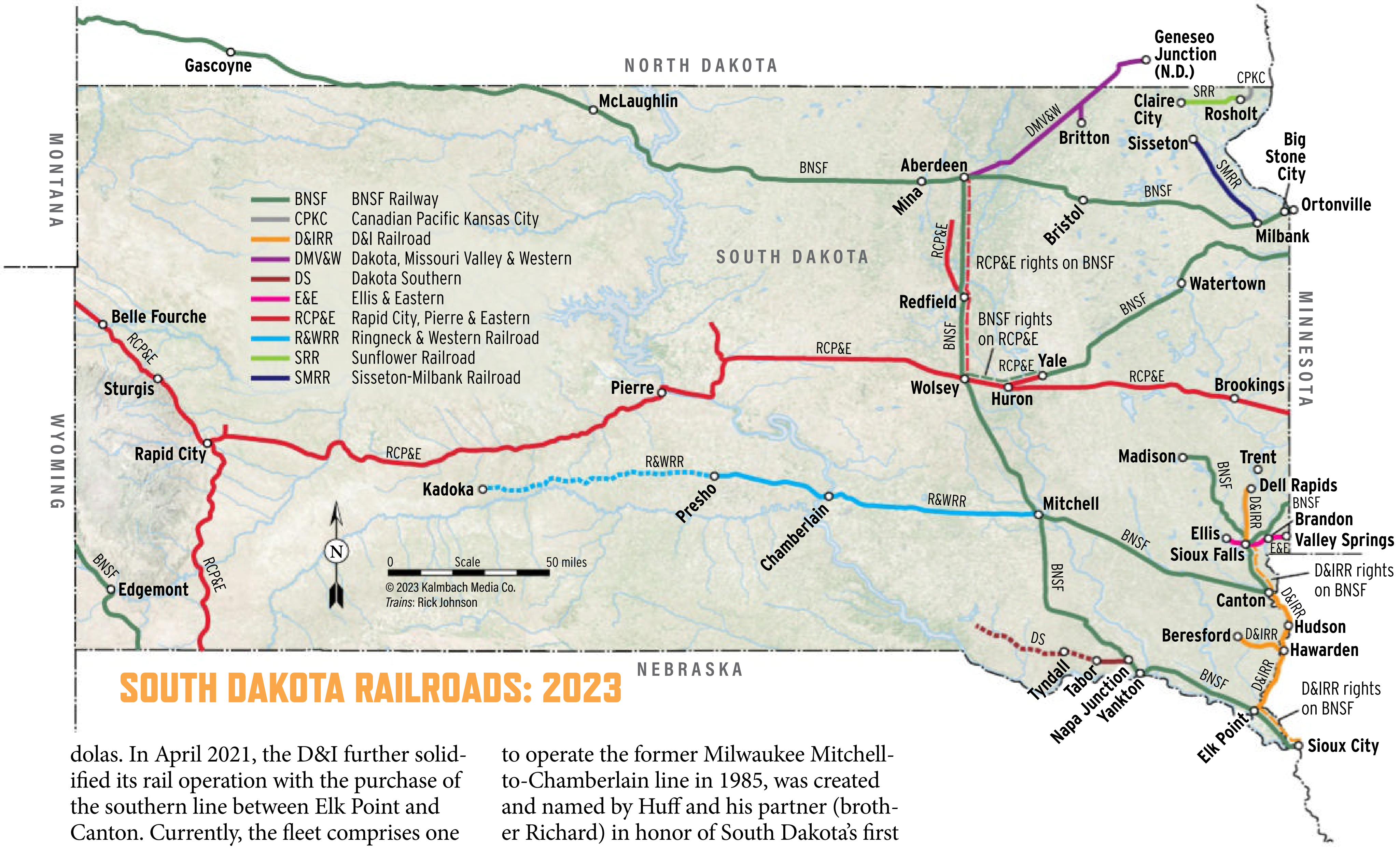
With no viable way to reach markets in the region after the abandonment, the logical option for Everist was to assume operation of dormant railroad lines. Consultants and seasoned railroaders created a system; the D&I Railroad, functioning as a division of Everist, to serve the company's needs.

The D&I (sometimes known as the Dakota & Iowa, although offically, the initials don't stand for anything) had secured a group of former Milwaukee GP9s and other four-axle power to move its former Milwaukee Road hopper cars on the ex-Milwaukee line from Dell Rapids to Sioux Falls. Tonnages increased steadily and interchanges with adjacent railroads developed.

At Sioux City, Iowa, the D&I established transloading facilities for the distribution of aggregates both by land and Missouri River barges. Everist also tapped new sources of revenue including grains, ethanol, fertilizer, and cement. Additionally, a Chicago & North Western branch line from Hawarden to Beresford, S.D., facilitated grain shipments and offered car-storage space.

To date, Everist has secured hundreds of new and used aggregate hoppers and gon-

Two former Canadian National SD40-2Ws are in charge as a Ellis & Eastern train arrives at Sioux Falls from Corson, S.D., to be loaded with fresh sand on June 8, 2022. The railroad operates about 15 miles of former Chicago & North Western trackage. William H. Davis Jr.


NORTH DAKOTA
SOUTH DAKOTA
NEBRASKA
MONTANA
WYOMING
MINNESOTA
BNSF BNSF Railway
CPKC Canadian Pacific Kansas City
D&IRR D&I Railroad
DMV&W Dakota, Missouri Valley & Western
DS Dakota Southern
E&E Ellis & Eastern
RCP&E Rapid City, Pierre & Eastern
R&WRR Ringneck & Western Railroad
SRR Sunflower Railroad
SMRR Sisseton-Milbank Railroad
Gascoyne
McLaughlin
Geneseo Junction (N.D.)
CPKC
SRR
Claire City
Rosholt
Britton
Sisseton
Big Stone City
Ortonville
Milbank
Aberdeen
Mina
Bristol
RCP&E rights on BNSF
Redfield
BNSF rights on RCP&E
Watertown
Belle Fourche
Sturgis
Rapid City
Pierre
Wolsey
Huron
Yale
Brookings
Kadoka
Presho
Chamberlain
Mitchell
Madison
Trent
Dell Rapids
Brandon
Valley Springs
Ellis
Sioux Falls
D&IRR rights on BNSF
Canton
Hudson
Beresford
Hawarden
Edgemont
Tyndall
Tabor
Napa Junction
Yankton
Elk Point
Sioux City
Scale 0 50 miles
N

SOUTH DAKOTA RAILROADS: 2023

© 2023 Kalmbach Media Co. *Trains*: Rick Johnson

dolas. In April 2021, the D&I further solidified its rail operation with the purchase of the southern line between Elk Point and Canton. Currently, the fleet comprises one of the largest groups of privately held cars in the nation. According to a company source, the railroad's motive power consists of 20 units: six GP9s, two GP39-2s, and 12 SD40-2s. Power and equipment are maintained at company shops in Dell Rapids.

ELLIS & EASTERN

Formed in 1988 to operate an ex-Chicago & North Western branch line through Sioux Falls, the Ellis & Eastern originally shipped quartzite and other materials from its sizable quarry. The E&E currently operates with an eclectic mix of seven EMD units between Brandon and Ellis, S.D. It purchased rights to the property of the former Minnesota Southern Railway beyond Brandon in 2017.

The rehabilitated railroad handles products in the Sioux Falls market including aggregates, lumber, machinery, grain, and chemicals. It will assume control and associated trackage rights to Worthington, Minn., where it plans to interchange ethanol, grain, and other shipments with the Union Pacific, by 2024.

DAKOTA SOUTHERN RAILWAY

If there is a godfather, or at least a foremost figure in the state's shortline railroading renaissance, it would undoubtedly be Alex Huff. George (Alex) Huff IV came to South Dakota to assist in the development of several lines that emerged from the Milwaukee's fire sale.

The second Dakota Southern, organized to operate the former Milwaukee Mitchell-to-Chamberlain line in 1985, was created and named by Huff and his partner (brother Richard) in honor of South Dakota's first rail route to Yankton (1873 to 1880). Sister railroad Sisseton Southern, another of Huff's operations, was based in Milbank in the late 1980s. Originally called Dakota Rail, it's now the Sisseton-Milback Railroad, owned and operated by Minnesota's Twin Cities & Western Railroad.

Huff oversaw the Chamberlain line's reopening west to Kadoka in 1989. "DSRC stood for darn slow railroad company," says Rick Van Zee, Dakota Southern track laborer and engineer. "It was always fun and full of surprises, wearing many hats — one day putting in ties; another day running the mower; and, oh yes, running a train while rolling along at 8 miles an hour. One has much time to ponder. I learned to cut off light power; run the engine up to grade with the sanders on; back up sanding to the train; couple up, then try pulling again if the sandbox was full."

After college at the University of South Dakota, Van Zee went to work for Southern California's Pacific Harbor Line in 1999 (see "A Short Line Like No Other," September 2022). He currently holds the position of superintendent. "It is definitely different running stack trains in LA from running

Dakota Southern was one of the key early operators as shortline railroading developed in South Dakota, but has given way to other companies today. SD9 No. 4427 leads a westbound train at White Lake, S.D., on May 23, 2013. Dan Kwarciany

6056
DAKOTA, MINNESOTA & EASTERN
DME

The Dakota, Minnesota & Eastern was created in 1986 to prevent abandonment of Chicago & North Western lines from Winona, Minn., to Rapid City. Engineer Scott Sherman is in charge of a southbound DM&E grain train near Hermosa, S.D., in 1997. Rick Mills

SD9s and grain cars on 60-pound rail laid back in the 1880s," he says.

After 25 years, Huff sold the Dakota Southern operation to Midwest Pacific RailNet and Logistics. One holdover from the second incarnation of the DS is the branch line from Napa Junction to Tabor on the former Platte line, now being utilized for car storage by MPRL. The Dakota Southern retained its name until the company was sold to Watco in 2021.

PHEASANTS AND FREIGHT

The Ringneck & Western Railroad began operations in May 2021 over 100 miles of former Dakota Southern track between Mitchell and Presho, S.D. Watco traffic consists mainly of grain, fertilizer, and paper products interchanged with the BNSF Railway at Mitchell.

Pursuit of new opportunities and sources of revenue are ongoing, including increased agricultural shipments around the Plankinton and Kimball areas. Watco Executive Chairman Rick Webb says, "We are honored to continue building from this tremendous foundation, and excited to be coming to South Dakota."

Between 10,000 and 12,000 cars are handled annually, primarily shuttle trains interchanged with the BNSF at Mitchell. Supplementing Watco and BNSF locomotives are pooled units from other railroads used on the various shuttle trains.

NEW LIFE FOR THE C&NW

The Chicago & North Western's secondary line from the Mississippi River at Winona, Minn., to Rapid City, S.D., was never afforded as much attention as other routes on the North Western system. Deferred maintenance and diminished traffic found the route on the potential abandonments list by the latter part of 1983. A concerted effort by local shippers and politicians was focused on keeping the line operational. It was sold to a group of investors in 1986, becoming the Dakota, Minnesota & Eastern, which garnered headlines from Day 1.

"It was often like a county 4-H club going up against Archer Daniels Midland," recalls a former company official. "Pick your problem: worn-out locomotives, worn-out track, a shortage of cars — the employees just kept doing the work the best we could provide. But we usually had the shippers on our side, and that went a long ways."

In 1996, the Union Pacific Railroad, which had merged with the C&NW in 1995, showed no interest in retaining its former C&NW track in western South Dakota. The north-south line along the Black Hills was sold and became the DM&E's Black Hills subdivision in May 1996. The additional carloadings of aggregates, bentonite, and cement served to secure the regional's finances during its second decade.

Robert Bach, a seasoned railroader, recalls, "When I hired on with the Cedar American Railroad Holdings (parent of DM&E and the Iowa, Chicago & Eastern) at Sioux Falls in October 2004 as a dispatcher/operations supervisor, it was an exciting time. I enjoyed being a part of a company which extended from the Black

3447
3447
PC PE

RCP&E's Belle Fourche Turn, with four SD40-3 rebuilds and 31 cars, departs Whitewood, S.D., on Oct. 1, 2021. That's a bridge for Interstate 90 in the distance. Blair Kooistra

Hills to Chicago, south to Kansas City, and north to the Twin Cities and watching as they were planning their Powder River coal basin expansion project."

With the prospect of a planned third coal route from western South Dakota into the Powder River coal fields, Cedar American became a popular commodity in the rail community. Shrewd positioning by the Sioux Falls-based corporation's officers led to its sale to the Canadian Pacific Railway in 2008.

The new properties not only granted CP access to a tantalizing source of new tonnage in Wyoming, but also valuable routes into the Minneapolis/St. Paul, Kansas City, and Chicago gateways.

However, the outlook for coal demand soured by 2012, and CP began to rethink its Wyoming investment in South Dakota trackage. In 2014, 670 miles of former DM&E track between Tracy, Minn., and Rapid City; north of Rapid City to Colony, Wyo.; south of Rapid City to Crawford, Neb,; and connecting branch lines were sold by CP to the multinational shortline holding company Genesee & Wyoming.

WELCOME TO RCP&E

G&W's Rapid City, Pierre & Eastern was "born" on June 1, 2014, with headquarters for the new regional in Rapid City. On-line customers ship approximately 53,000 carloads of aggregates, bentonite clay, cement, ethanol, fertilizer, grain, and other products annually. RCP&E operates with a fleet of approximately 45 EMD units and interchanges with BNSF, Canadian Pacific, Union Pacific, and the Nebraska Northwestern Railroad.

A mix of infrastructure improvements and setbacks have beset RCP&E managers and employees since startup. Company representatives continue to familiarize state officials, community leaders, and shippers with the new regional operation and to seek ideas and critiques for future plans.

A Rebuilding American Infrastructure with Sustainability and Equity, or RAISE, grant of $22 million for the South Dakota Freight Capacity Expansion Project will, among other things, allow the RCP&E to install nearly 88 miles of 136-pound welded rail, upgrade 121 bridge structures, install 11 new mainline turnouts, and replace 80,000 crossties.

"With this federal grant, associated support by the State of South Dakota [$40 million], and our own investment [$20 million], RCP&E will offer West River a highly competitive link to three major railroads on the national freight network," says Rod Wiseman, RCP&E's general manager. "These major track upgrades will support the West River economy, improve the productivity of current customer supply chains, and further enhance western South Dakota for new business investments."

Additionally, RCP&E filed an application for a Consolidated Rail Infrastructure and Safety Improvement grant for assistance with the construction of a new locomotive repair facility in Huron. The proposed shop is required to maintain newer locomotives, as the 1907-constructed roundhouse is too small for the expanded locomotive fleet required to pull heavier trains with the use of distributed power units, or for pool service on partnering Class I railroads.

NORTHEASTERN NOTABLES

A remnant of the former Soo Line still exists: the Canadian Pacific Kansas City from Veblen Junction, N.D., to Rosholt, S.D., and the Sunflour Railroad extending on from Rosholt to Claire City. The CPKC portion functions as a traditional agrarian branch, and the route west of Rosholt operates on an as-needed basis for car storage.

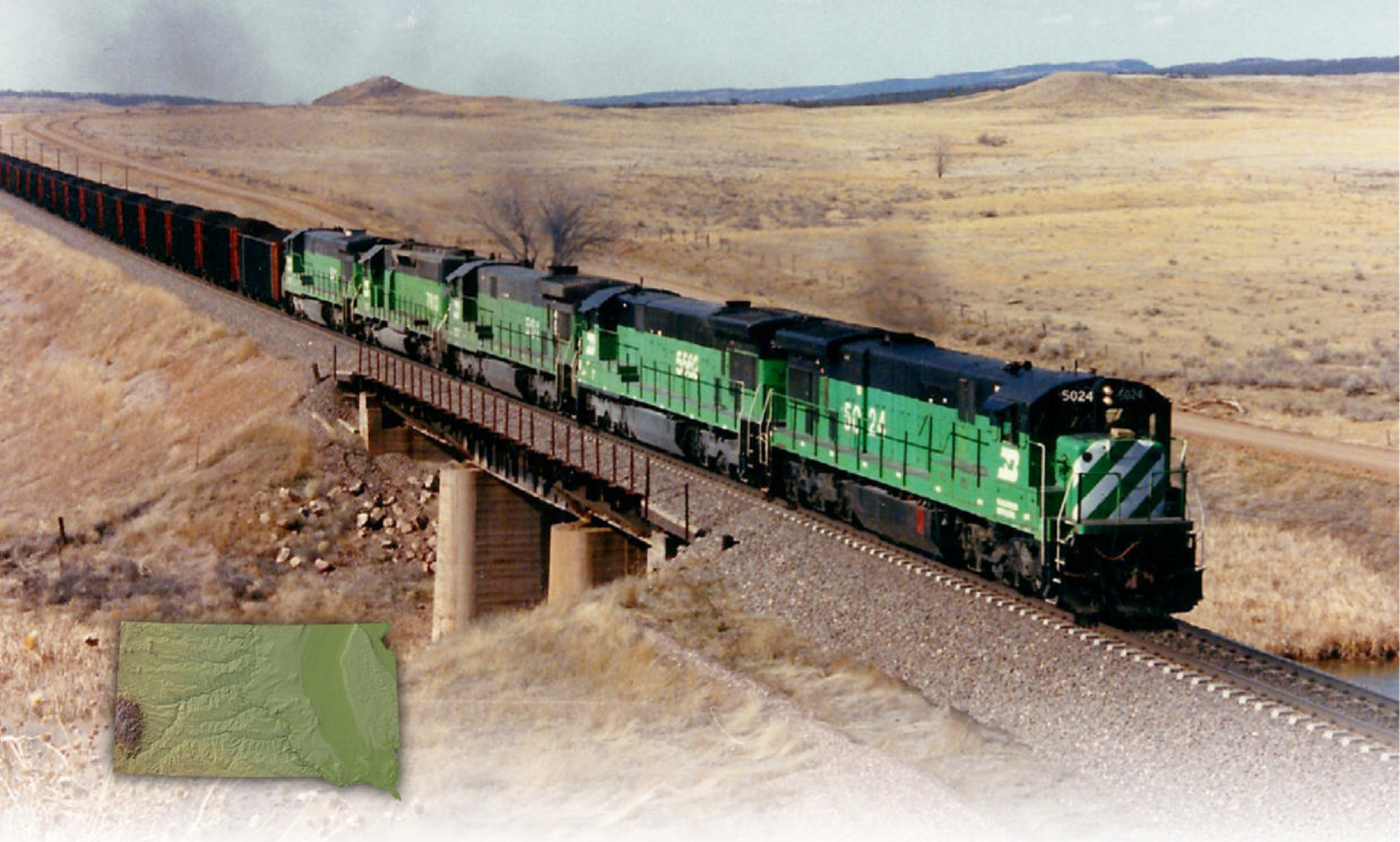
Another operation originating in southern North Dakota is the Dakota, Missouri Valley & Western. The North Dakota-based carrier began operations on primarily ex-Soo trackage in North Dakota and Montana in 1990, and currently leases the former Great Northern/BN line from Geneseo Junction, N.D., to Aberdeen, S.D., plus a connecting former Milwaukee spur to Britton, S.D. At Aberdeen, the regional interchanges traffic with the BNSF's Appleton, Minn., subdivision. At Appleton, the BNSF's former GN/BN branch line reaches across the border to serve Watertown and other smaller stations.

BACK FROM THE BRINK

According to the 2022 State Rail Plan, developed by South Dakota's Division of Railroads, "the railroad system in South Dakota, once totaling 4,420 route miles, has dwindled to a 1,935-mile system at the end of 2021.

South Dakota is currently served by two Class I railroads, one Class II (regional) railroad, seven Class III (short line) railroads, and two independent steam-powered tourist railroads."

The "Land of Infinite Variety" is one of South Dakota's more enduring slogans. It certainly seems to apply to the state's remaining rail operations. I



On March 31, 1991, four Burlington Northern C30-7s and one SD40-2 pull a string of loaded coal hoppers from the Powder River Basin near Dewey, S.D. At this time, BN took delivery of 100 EMD SD60Ms and soon many SD70MACs. Those new locomotives would bring an end to power sets like this in a short time.

VHSmemories

Preserving Dakota rails on film and videotape

Story and photos by Chris Laskowski

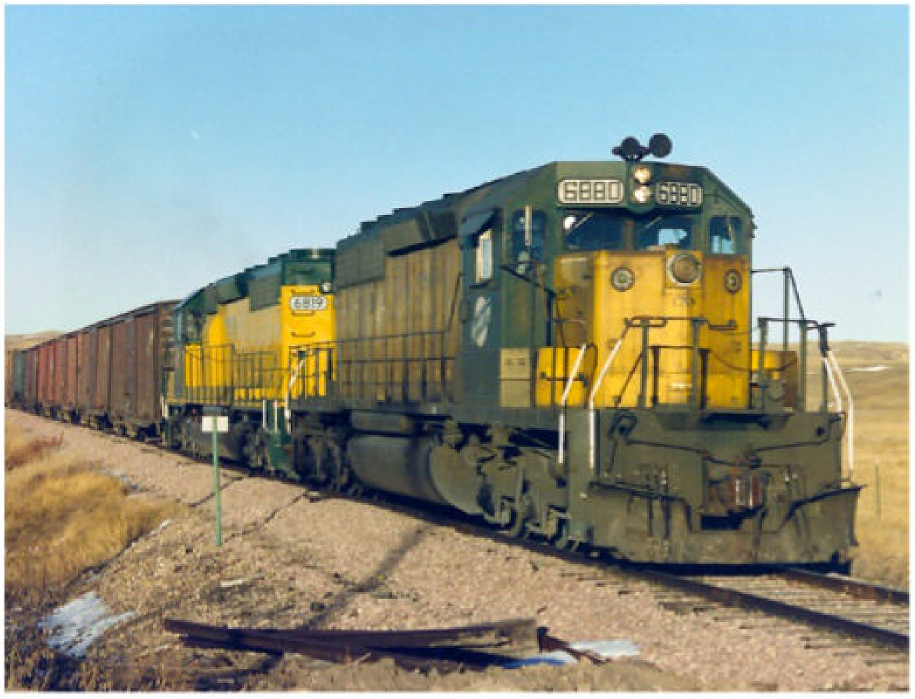
My interest in producing railroad videos was probably inevitable — I'm the grandson of a Burlington depot agent and the son of a television newsman.

As a young boy, our family often traveled from my hometown of Rapid City, S.D., to my grandma's home in Grand Island, Neb. The drive along Highway 2 closely followed the ex-Chicago, Burlington & Quincy line southeasterly from Alliance, Neb. Most trains on the line were coal and empty hopper trains serving Wyoming's Powder River Basin. Watching Burlington Northern's then-plentiful green and black engines, with a logo that I didn't quite understand until my teenage years, was the best thing to entertain a kid on a long drive through the Nebraska Sandhills. I found fascination in watching these trains, and it inspired me to have a train set like every other rail-loving kid.

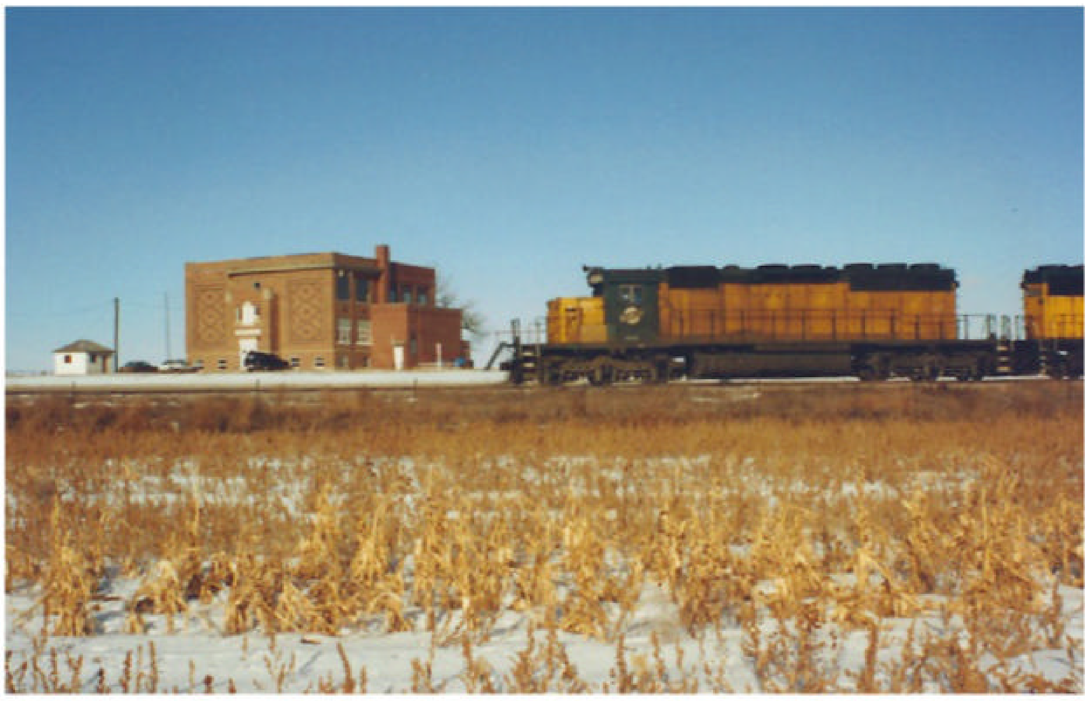
Then came my teenage years. Trains? Well, not so much of a love anymore by now — my 1980 Chevy short-box pickup, girls, and a new love for radio control off-road racing pretty much took over my interest, as the girls never found much of an interest in me. After graduating from Rapid City Central High School in 1988, it was off to Denver to pursue a career in video production at the Bailey School of Broadcasting.

After graduation in 1990, it was pretty much an immediate transition to my first full-time job with a television station in western Nebraska. Scottsbluff, situated in the state's panhandle, hosted one of the BN's coal lines, and Union Pacific's coal route through the neighboring town of Gering provided a lot of chances to watch trains, and served to ignite that old passion once again.

After a couple years in Scottsbluff, I moved back to Rapid City. I began to capture trains in my home state on video — with my then state-of-the-art VHS video camera.



On Dec. 3, 1993, Chicago & North Western No. 6880 and recently repainted No. 6819 lead a southbound train past the 777 Ranch near Fairburn, S.D. The train is heading to Dakota Junction, near Chadron, Nebraska. It will eventually transfer its freight to the Burlington Northern in Crawford, Neb.



The last train on the Chicago & North Western's "Cowboy Line" rolls past the rural schoolhouse in Clinton, Neb., on Dec. 1, 1992. Two locomotives and one empty gondola were the stars of the day for the final run on this line between Long Pine and Chadron, Neb.

In fact, my passion for trains became a part of my own video production business — C. Vision Productions — since 1991. I enjoyed the reactions and interest of railroaders intrigued by the new video preservation of their occupation. I focused on operations of the Dakota, Minnesota & Eastern, Burlington Northern, and Chicago & North Western's lines in South Dakota and Wyoming. I still can hear the sets of five of these locomotives (BN's SD40-2s, C30-7s and the Oakway SD60s) working hard along the western slopes of the Black Hills in Newcastle, Wyo., and down through Edgemont, Igloo, and Provo, S.D.

However, some of my most cherished memories from the early 1990s involved my trips to capture the Chicago & North Western's line from Chadron, Neb., to Belle Fourche, S.D. During this time, the Colony Line was not a popular destination for railroad photographers. Most North Western fans didn't even recognize the far western part of the C&NW system as it was isolated from the railway's main line between Nebraska and Chicago.

A good friend and I spent many hours together capturing North Western trains. One of the most memorable was a chase of the last train from Long Pine to Chadron, Neb., before that line was abandoned on Dec. 2, 1992. Not only did we get some great nighttime and daylight photos and videos along this stretch of line, but we were also treated to a cab ride for a portion of the journey. SD40-2 No. 6848 and a GP50 hauled a single gondola for that last trip. It seemed fitting for a final run on a line.

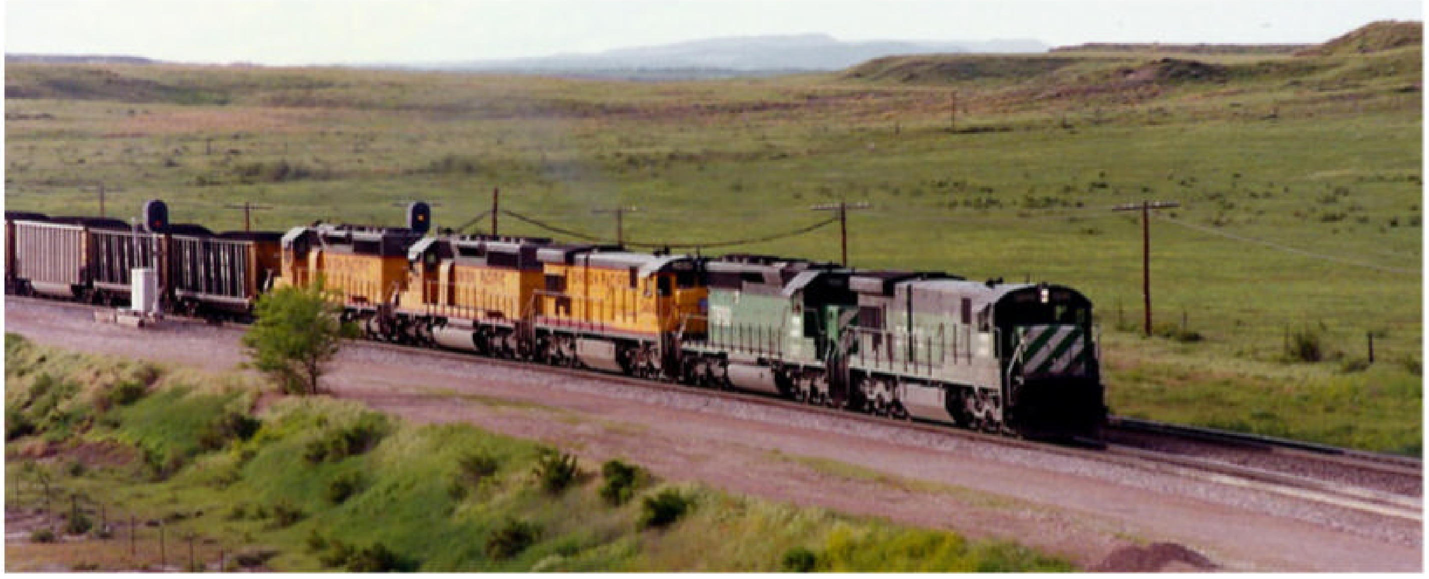
This is by far the best experience I had shooting the C&NW, but I have many other memories, including following the last northbound train from Chadron to Rapid City in April 1995 — the day before Union Pacific took over operations of the line.

I spent the last year of my time in Rapid City capturing Union Pacific trains operating across the former C&NW Colony Line from April 1995 to May 1996, when that line was sold to the Dakota, Minnesota & Eastern.

My career path changed, and I made a move to Sioux Falls, in eastern South Dakota. While in Sioux Falls, I enjoyed the different landscape and types of trains in and around this part of the state, including the BNSF, the industrial Ellis & Eastern on the former C&NW's Omaha line, the Dakota Southern, and the regional operator Dakota & Iowa (D&I).

I have been fortunate to have seen so much of the railroading action in this region for the past years and have recorded much of it; my catalog of railroad videos has grown to nearly 300 shows. I met my wife in Sioux Falls in 1998, and we decided to relocate to the Twin Cities of Minnesota, her hometown.

I have made trips back to my beloved Black Hills to visit and see the operations on the railroads across South Dakota. It is hard to believe how much has changed since the early 1990s. My memories from western South Dakota, and across the state will never leave my mind, along with friendships with the railroaders and Dakotans I made along the way. I



On a hot and humid June afternoon in 1991, two BN 3,000-hp locomotives are being assisted by a trio of Union Pacific locomotives on a loaded coal train climbing the grade into the ghost town of Igloo, S.D.

Countdown to 1,000 ISSUES

Trains traction expert, William D. Middleton rides...

Tomorrow's railroad

Story and photos by William D. Middleton

SHINING ON US like a train's ditch lights in the distance, *Trains* Magazine continues to highlight an article from each decade as we approach the 1,000th issue. This rather offbeat choice, chosen by staff (and contributors) from issues 300 through 399 (October 1965 to January 1974), is entitled, "Tomorrow's railroad," from the April 1966 issue. "Tomorrow's railroad" takes readers on an amazing journey through Japan's high-speed railway and its inner workings — a unique traveling adventure that, even today, one would have to leave North America to truly experience.

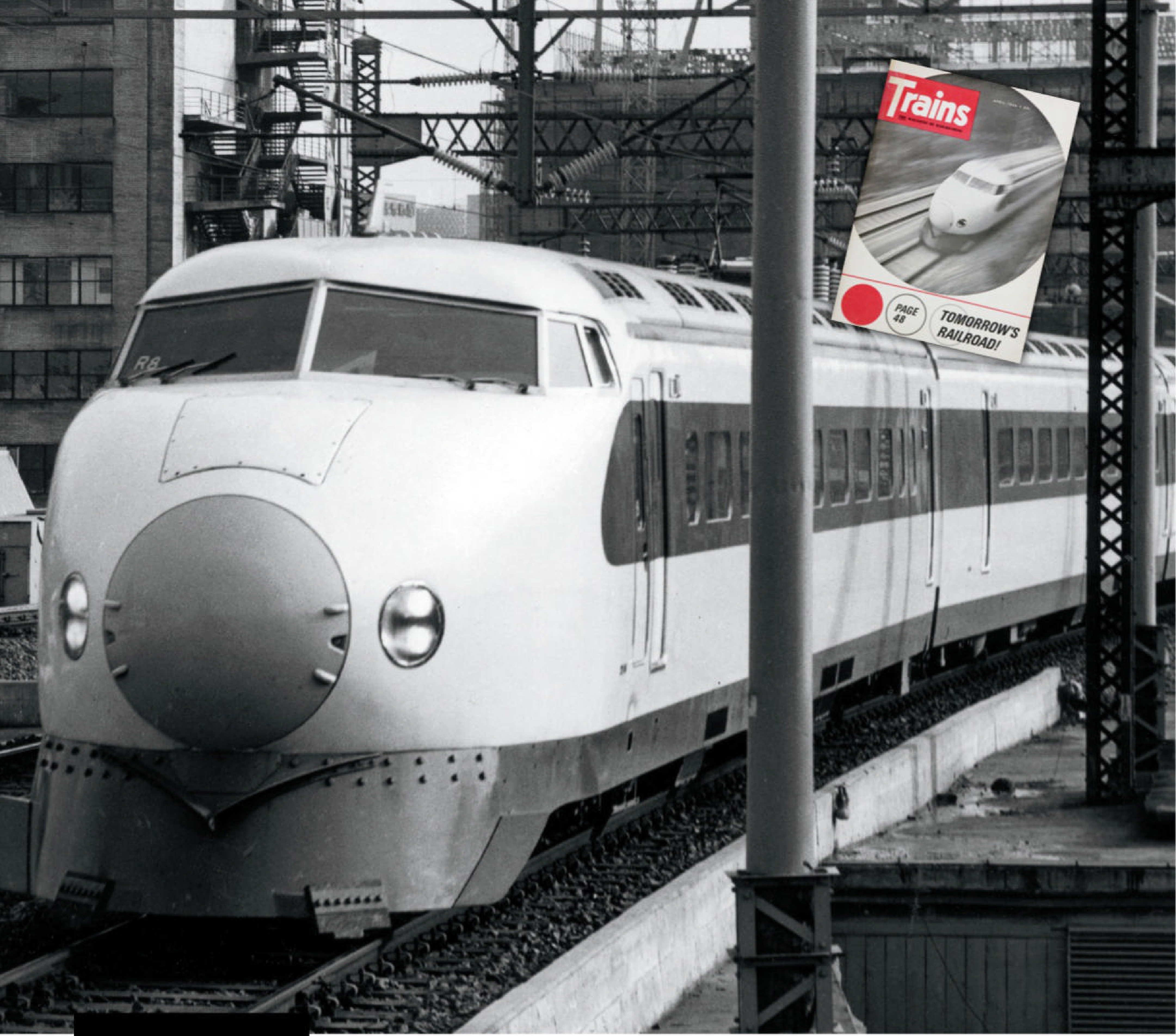
Author William D. Middleton successfully introduces the *Trains* audience to Japan's Bullet Trains — the world's first true high-speed trains on the New Tokaido Line — permitting us the luxury of enjoying such an experience from the comfort of our own homes. — *Nastassia Putz*

They call it the "Super-Express of Dreams," the "Bullet Line," or simply the New Tokaido Line (NTL for short) of the Japanese National Railways. By whatever name it's known, JNR's new 320-mile highspeed super-railroad between Tokyo and Osaka is a towering technical achievement for Japan.

The New Tokaido Line, which was barely 5 years under construction and cost some 380 billion yen (or a little over a billion dollars), was opened to traffic amid traditional Oriental ceremony on Oct. 1, 1964 — just a few days before the start of the 1964 Olympic Games at Tokyo. Operating at 210 km/hr (130 mph) maximum speed, the NTL immediately set new world speed records for railway passenger service, and its installations and equipment represented a level of railway technology unsurpassed anywhere in the world.

The Bullet Railway, constructed to 4 feet-8½ inch standard gauge instead of the 3 foot-6 inch narrow gauge employed elsewhere on the Japanese national system, closely parallels JNR's overburdened old Tokaido line through the central Honshu region which is the population and industrial heart of Japan. Taking its name from the ancient "Eastern Sea Road" highway connecting Tokyo and Osaka, the Tokaido route links Japan's five largest cities — Tokyo, Osaka, Nagoya, Yokohama, and Kyoto, each with a population in excess of 1 million. Altogether the densely populated region it serves contains some 40% of the total Japanese population, and no less than 70% of Japan's industry.

THE NEED FOR a completely new super-railroad paralleling the old JNR Tokaido line derived from Japan's phenomenal postwar economic boom, much of which has focused on the central Honshu area served by the Tokaido route. As a natural consequence of the region's population and industrial density, the Tokaido line has long been JNR's heaviest traffic artery. Although it has constituted barely 3% of the system's route length, the Tokaido route in recent years has been moving close to a quarter of JNR's total freight and passenger traffic. Moreover, during the 1950s JNR found that traffic was increasing more rapidly on the Tokaido line than on any other part of the system. A prediction



New Tokaido Line train arriving at Tokyo Central Station from Osaka on Aug. 31, 1965. William D. Middleton

was made that by 1975 Tokaido line traffic volume would double that of the late 1950s.

The ability of the old Tokaido route to absorb this growing traffic load was severely limited. The line, laid to JNR's 3 foot-6 inch gauge standard, was largely double track, with some four track sections in urban areas. Operating efficiency was restricted by such factors as the low capacity of narrow-gauge equipment and the line's relatively modest standards of curve and grade. Such considerations as a traffic mix that ranged from slow passenger locals to heavy tonnage freights to fast limited passenger trains, as well as some 100 stations and more than 1,000 grade crossings in the 345 miles between Tokyo and Osaka, handicapped any effort to significantly increase overall operating speeds.

Nonetheless, JNR did what it could to stave off traffic strangulation on the overloaded route. Improved signaling, expansion of electrification (completed over the entire Tokyo-Osaka run by November 1956), and a fleet of modern electric locomotives and high performance M.U. passenger equipment helped JNR to cope with the rising tide of Tokaido line traffic. But by the early 1960s traffic on the line was fast approaching complete saturation, with as many as 200 freight and passenger trains operating daily.

Fortunately, JNR in anticipation of an eventual requirement for additional track capacity had initiated detailed planning several years earlier. Some work had been done on a similar project as far back as World War II, but the real start to the New Tokaido Line project was the formation in August 1957 of JNR's Tokaido Trunk Line Study Committee, which was charged with the task of finding a solution for Tokaido line congestion.

A year after its formation the committee returned a report proposing the construction of an entirely new double-track railroad between Tokyo and Osaka at the earliest possible date. JNR next established the New Tokaido Line Construction Standards Committee which set out to develop basic standards for the new line.

Three basic principles for NTL construction were laid down by the standards committee: First, on both the new and old Tokaido lines, trains should be operated at as near uniform speeds as possible in order to attain the highest operating efficiency and capacity from each line. Thus it was planned to confine traffic on the old Tokaido line to freight and local passenger trains; the New Tokaido Line would be devoted to high-speed passenger service and a limited amount of high-speed freight operation.

Second, the New Tokaido Line should be constructed on an entirely new route laid to 4 feet-8½ inch standard gauge. The decision for a separate route was easily made in view of the difficulties entailed in attempting to construct additional tracks alongside the old line, particularly in congested urban areas. The choice of track gauge was more difficult. Adoption of the same 3 foot-6 inch gauge standard elsewhere on JNR would have permitted equipment interchange between NTL and the rest of the system. By forgoing interchangeability, on the other hand, JNR could gain complete freedom in the application of modern technology to the construction of the New Tokaido Line and its equipment. Moreover, choice of a broader track gauge would provide a greater margin of safety and stability at the extremely high speeds contemplated, and would permit the use of larger and higher-capacity equipment. Believing the merits of "broad gauge" to outweigh those of interchangeability, JNR's standards committee chose 4 foot-8½ inch gauge for NTL.

Third, the NTL would be electrically operated with commercial-frequency (60-cycle) alternating current and would employ M.U. electric railcar trains. Several considerations prompted JNR's choice of M.U. equipment over locomotive-hauled trains. The use of locomotives on the new line would have required substantially heavier bridges and elevated structures than were necessary for M.U. train operation. Electric railcar train sets also offered the advantage of quick turnaround at terminals. Finally, M.U. equipment permitted higher performance characteristics than would have been possible with locomotive-hauled trains, as well as the advantage of uniform speed and performance characteristics regardless of the number of cars in a train.

ONCE THE BASIC GUIDELINES had been laid down for the New Tokaido Line, JNR initiated a massive research program aimed at perfecting the technology required for what would be the world's most advanced railroad. Utilizing the facilities and staff of its Railway Technical Research Institute at Tokyo, JNR organized nine special teams to concentrate on planning for NTL construction, covering the areas of overall NTL standards, high-speed track structures, high-speed rolling stock, dynamics of high-speed rolling stock, high-speed braking systems, overhead wire systems, electrification, high-speed signaling, and automatic train operation.

Between 1957 and 1963 JNR's special teams undertook research and study in some 173 areas. An optimum rail section was determined, new methods of rail fastening developed, and a new type of prestressed concrete tie designed. Extensive studies determined the effects of air pressure when operating through tunnels at high speed. A testing program was used to select the best type of overhead distribution system and to devise a new type of pantograph that worked satisfactorily at 130 mph.

Broad research was initiated to develop the highly advanced all-electronic signaling and automatic-train control systems required. A computer program was applied to the task of designing the lightest possible carbody structure. Investigation was carried out for improving the performance and riding qualities of trucks, with special emphasis on eliminating the "hunting" effect often encountered in multiple-unit-type equipment. Rocket brakes, track brakes, and air drag brakes, as well as more orthodox braking systems, were studied in order to determine the most effective high-speed system. Traction motors, communications systems, and many other components were similarly subjected to detailed research and study.

Even before JNR had perfected all of the technology required for the New Tokaido Line installations and equipment, actual building was under way. By 1959 a budget for NTL construction had been approved, and in April 1959 work was started near Atami on the 4.9-mile New Tanna Tunnel which was expected to be the most difficult and time-consuming project on the entire line. Except for the New Tanna and other long tunnels, however, most of the first year and a half was devoted to right-of-way acquisition and final route location. The construction timetable allowed another 2 years for putting in roadbed and structures, and the last year and a half for track-laying, installation of signaling and electrification, and test operation of trains.

More than 2 years ahead of the scheduled NTL completion date, JNR finished a 23-mile test section of the line between Odawara and Yokohama. By June of 1962 JNR was able to begin operation with six prototype M.U. cars. These were employed in an extensive testing program which helped to perfect the design of NTL installations and production rolling stock. In one test on March 30, 1963, a record maximum speed of 256 km/hr (159 mph) was reached.

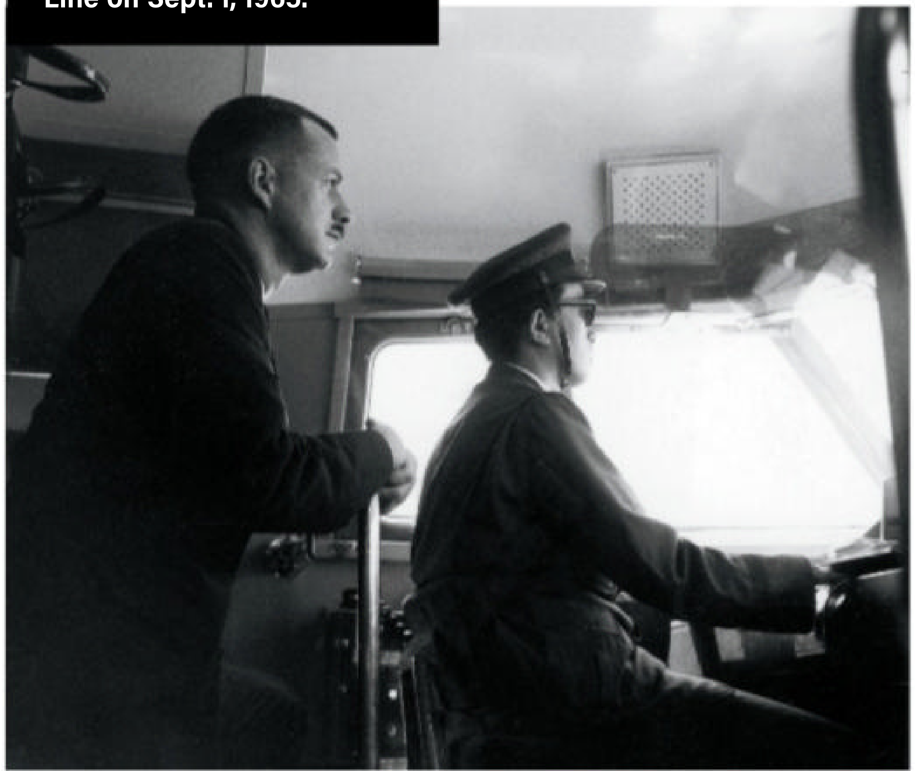
Delivery of the Bullet Line's production rolling stock fleet of 360 M.U. railcars commenced in April 1964. By late July the track and power systems were completed over the entire route, followed a month later by the signaling and automatic train control installations. This allowed ample time for equipment testing and break-in and crew training before the Bullet Line's scheduled Oct. 1, 1964, opening.

INITIAL NEW TOKAIDO LINE schedules provided for the operation of 30 trains daily in each direction, divided about equally between *Hikari* (meaning *Light*) super-express schedules and *Kodama* (*Echo*) limited-express schedules. *Hikari* trains, making intermediate stops only at Nagoya and Kyoto, were scheduled over the 320-mile Tokyo-Osaka run in 4 hours flat. *Kodama* schedules, stopping at all 10 intermediate stations, were allowed 5 hours.

Representing a total of 9,470 miles daily timed at start-to-stop averages in excess of 75 mph, including no less than 5,947 miles scheduled at averages of over 80 mph, the initial Bullet Line timecard promptly established JNR as the undisputed speed champion of world railroading [see Donald M. Steffee's speed survey, page 20, June 1965 *Trains*].

Spectacular as they were,

Middleton rides the head end of *Hikari* Super-Express No. 9 on the New Tokaido Line on Sept. 1, 1965.



NTL's inaugural schedules were only a modest beginning. To permit adequate settlement and stabilization of the most recently completed sections of the roadbed, speed restrictions were enforced on much of the line during the first year of operation. New schedules which became effective Nov. 1, 1965, reduced Tokyo-Osaka *Hikari* running times to only 3 hours 10 minutes. (Original JNR plans contemplated a 3-hour flat timing. The decision to add a Kyoto stop to *Hikari* schedules required an additional 10 minutes.) *Kodama* timings were reduced to an even 4 hours.

In addition to instituting the faster Bullet Line timetables, JNR has substantially increased the number of scheduled trains. Delivery of an additional 120 M.U. cars permitted an increase in NTL schedules to 43 trains daily in each direction effective Oct. 1, 1965. The increased equipment availability afforded by the Nov. 1 schedule acceleration allowed a further increase in service to a new total of 55 round trips daily.

In its first year of operation the New Tokaido Line has scored a solid success. The comprehensive research and testing program that preceded NTL construction, plus JNR's broad background of electrification experience, has produced a highly reliable and efficient railway. The timekeeping ability of the New Tokaido Line and the performance and riding quality of the rolling stock are exceptionally good. Bullet Line load factors have been remarkably high. *Hikari* trains have been averaging about 92% of capacity, and *Kodama* trains have been running at about 80% to 85% of capacity.

New Tokaido Line *Hikari* train travels 83.4 miles in 47 minutes equaling 106.5 mph.

Japanese National Railways

The Bullet Railway's tremendous carrying capacity has brought substantial relief to the old Tokaido line. Upon the opening of NTL in 1964, JNR was able to drop 19 daily limited and ordinary express round trips from the congested narrow-gauge route. Effective with the increased NTL service on Nov. 1, 1965, Japanese National made a further reduction of 15 daily trains on the old line.

JNR foresees a steady growth in New Tokaido Line traffic. Anticipating an annual traffic increase of 6%, JNR expects to add about 10 round trips annually to its NTL schedules. Since ATC equipment provides a capability for operating trains on a 5-minute headway, the New Tokaido Line has a potential passenger-carrying capacity far beyond anything JNR contemplates for the immediate future.

Even higher speeds are in store for NTL. By 1970 JNR expects to be operating its Bullet trains at maximum speeds of 250 km/hr (155 mph), with its fastest trains covering the Tokyo-Osaka distance in only 2½ hours. Equipment refinements will make the fastest service possible. Track and roadbed standards are already adequate for the higher speeds.

Original JNR planning for the New Tokaido Line considered the operation of a high-speed freight service in addition to passenger traffic. Freight service would be confined to containerized traffic, moved by 80 mph M.U.-type equipment on 5½-hour Tokyo-Osaka schedules during the late night hours when passenger trains are not operated. Although no firm commencement date has been set for the service, JNR still includes the world's fastest freight trains in its plans for the Bullet Line.

Looking ahead to further growth of the Japanese economy as well as of its own traffic, JNR has already laid ambitious plans for a westward expansion of standard gauge super-railroading along the southern coast of the main island of Honshu and beyond to the southernmost island of Kyushu.

SECOND IN IMPORTANCE only to the Tokaido route, and similarly suffering from problems of growing traffic density, is JNR's San-yo line. Forming a westward extension of the Tokaido route, the San-yo line extends along the southern coast of Honshu, linking Osaka with Kobe, Okayama, Hiroshima, and Shimonoseki at the western end of Honshu, where a connection is made via the Kanmon tunnel with JNR lines serving Kyushu. At present, the San-yo line, some 337 miles in length, handles an annual traffic of 20 million passengers and 13 million tons of freight.

Under recently announced plans, JNR will extend the New Tokaido Line 112 miles westward to Okayama by 1970 and some 200 miles farther to Hakata on Kyushu by 1975. The system estimates that super-railroad standards will enable it to cut Osaka-Hakata running times from a present minimum of about 9 hours to 3½ hours.

Trains
16 pages on Maine's biggest two-foo
ALSO IN THIS ISSUE:
Impossible accident
Trains
Cataloging EMD's Geeps
SCHENECTADY'S SURVIVAL STORY
4th
different diesels
Trains
STEINHEIMER AND THE SP
Trains
IN THIS ISSUE:
Trains
ACTION IN UTAH —another Steinheimer spectacular!
Trains
CONSOLIDATIONS, INCORPORATED

The construction obstacles JNR will face in building the New San-yo Line will be even greater than those encountered in creating the NTL. Much of the line along the mountainous Honshu coast will be either in tunnel or on elevated structure. Mount Rokko, near Kobe, represents a barrier that will require a tunnel of about 9½ miles in length, and an undersea tunnel some 2,400 feet long must be drilled for the new crossing of the Kanmon Straits between Honshu and Kyushu. Present JNR estimates place the cost of the new line at nearly $1.4 billion. Work is already underway, and the railway expected to complete its final route selection for the initial Osaka-Okayama leg by the end of 1965 and to commence right-of-way acquisition soon afterward.

Even longer-range plans contemplate a northward extension of the New Tokaido Line from Tokyo to Sapporo on the northern island of Hokkaido via a new Tsugaru undersea tunnel. This would provide a standard gauge super-railroad backbone extending almost the length of the main Japanese islands.

IN REVIEWING THE REMARKABLE achievement represented by Japan's New Tokaido Line, one is inevitably compelled to make comparisons with the state of the art in our own country. In doing so the most striking conclusion reached is that what Japan has accomplished by revolution is remarkably similar to what our own railroads have approached through evolution. For despite their complete freedom to do anything they wanted, JNR's engineers were led by their research and judgment to design a system on which such basic essentials as the concept of flanged-wheel-on-steel-rail (laid to 4 feet-8½ inch standard gauge, at that), equipment configuration, and electrical propulsion system are identical to those developed on our own railroads and, indeed, on the railroads of most of the world.

To be sure, there is much in New Tokaido Line technology that depicts a level of development and sophistication beyond anything yet applied in North America or elsewhere. But all of the advances represented by the New Tokaido Line are no more than refinements to the basic features already common to North American railroading, and an NTL standard of super-railroading would seem to be within the grasp of any well-built U. S. trunk line through no more than grade-separation work, a reasonable amount of track realignment, track and signal upgrading, and improved equipment.

Happily, such standards of railroad operation may soon be applied to the growing problem of transportation congestion in America's most heavily populated urban areas. Federally sponsored tests of 150 mph trains on the Boston-New York-Washington corridor could have prototype trains of NTL characteristics on U. S. rails by the end of 1966. German and French railways, too, are fast approaching similar operating standards. What the Japanese started on Oct. 1, 1964, may well have begun one of the most exciting eras in railroading history.

An overall view of the inside of a new Tokyo Station for the New Tokaido Line.

Japanese National Railways

Super-railroad specs

THE JAPANESE NATIONAL Railways invested 6 years of research and testing, 5 years of actual construction, and over a billion dollars in the unsurpassed high-speed mass-transportation artery that is its 320-mile New Tokaido Line. Here is what JNR got for all this:

Track and roadbed

To permit safe operation at sustained speeds as high as 250 km/hr (155 mph) JNR built an entirely new grade-crossing-free, double-track, standard-gauge (4 feet-8½ inch) railroad between Tokyo Central Station and a new terminal at Shin (New)-Osaka. General standards were set for a minimum radius of curvature of 2,500 meters (8,200 feet, or a 0-degree 42-minute curve) and a maximum grade of 1.5%. Some shorter-radius curves were located in stations and urban areas, and grades of up to 2% were permitted if their length did not exceed 1 kilometer (0.62137 mile).

Construction of a line to these exceptionally high standards through the densely populated urban areas and often severe terrain of the Tokaido route was a formidable undertaking. Creation of the line required some 37 million cubic yards of cut and fill, and NTL builders placed over 5 million cubic yards of concrete and nearly 100,000 tons of steel in bridges and structures.

No fewer than 66 tunnels, totaling over 42 miles in length, were required. Employing highly mechanized tunneling equipment, the NTL crews were able to hole through the longest tunnel, the 4.9-mile New Tanna Tunnel, in only 3 years, in contrast to the 16 years required a half century earlier for the parallel Tanna Tunnel on the old Tokaido line.

Some 3,000 bridges aggregating 35 miles in length were constructed of ordinary reinforced concrete, prestressed concrete, or welded structural steel; and nearly 71 miles of line, largely in urban areas or across low agricultural areas, was placed on reinforced concrete elevated structure. The longest bridge on the new route, the 3,960-foot Fujigawa Bridge, is the third longest bridge on the entire JNR system.

NTL track construction employs crushed stone ballast and prestressed concrete ties. Rail is a specially designed 53 kg./m. (107 pounds/yard) section butt-welded into lengths of 1.5 kilometers (about 1 mile), which are connected by a special insulated joint. A "double-elastic" rail fastening developed for NTL uses a rubber track pad between rail and tie, plus springs to absorb lateral thrust and impact. Rails are held in place by spring clips bolted into the concrete ties. On steel bridge structures, where unballasted track was used, a somewhat similar double-elastic fastening served to attach rails to treated timber ties, which in turn were rigidly fastened to the bridge structure. Turnouts are of a specially designed type employing movable point frogs which permit straight through operation at maximum speeds without shock or vibration.

In order to lay the nearly 650 miles of track required for the New Tokaido Line in barely a year's time, JNR developed new methods of track-laying. At each of 22 track construction yards, 25-meter (82-foot) rails were gas-welded into 100-meter (328-foot) lengths, then fastened to ties to form 100-meter track "skeletons." After ballast was spread to the level of the bottom of ties, a special crane car placed the track skeletons and then ballast was brought up to the final level. Thermit welding was used to join the 100-meter sections into continuous welded rail.

Stations

Twelve new passenger stations were erected for the New Tokaido Line. In order to provide convenient interchange with JNR's Tokyo suburban lines, the NTL's Tokyo terminal was raised adjacent to JNR's central Tokyo station. At Osaka, where lack of space prevented placing a new terminal next to the existing station, JNR built an entirely new terminal about 2 miles north at Shin (New)-Osaka. Built on an elevated structure above the old Tokaido line, the terminal provides direct connections with JNR trains for western Japan. Except for entirely separate stations at Shin (New)-Yokohama and Gifu-Hashima, all of the 10 intermediate NTL stations stand adjacent to stations of the old Tokaido line, thus affording convenient interchange between trains of the two lines.

In almost every case the NTL stations are elevated structures, with ticket offices, waiting rooms, and other passenger facilities placed beneath the platforms. The Tokyo terminal is arranged with three stub tracks and has provision for the addition of a fourth track when required by increased traffic. The Shin-Osaka terminal, which at the present time has three stub tracks, is arranged so that it can be expanded to a four-track through station upon completion of the Bullet Line's planned western extension. Track layouts at intermediate stations are generally of two types. Stations where both super- and limited-express trains stop have four tracks, and island platforms are located between the two tracks for each direction. Stations where super expresses do not stop also have four tracks, but platforms are placed outside the two outer tracks, permitting super-express trains to operate through on the two center tracks without reducing speed. High-level platforms are used at all stations.

Passengers wait for a train at the Shinkansen platforms at Tokyo Central Station.
William D. Middleton

New Tokaido Line stations are spacious. Lavish use is made of terrazzo, marble, glass, glazed brick, tile mosaics, and polished stainless steel. Station architects carried the blue-and-ivory color scheme of the bullet trains into such details as the molded plastic seats and the standardized trash containers and ash trays installed along the platforms. Remote-controlled "roll sign" indicators suspended from platform canopies provide information concerning arriving and departing trains.

Power supply

To power its New Tokaido Line trains, JNR draws on commercial frequency electric power sources. Sixty-cycle alternating current is available to most of the line, but 50-cycle current is supplied to the Tokyo end. In order to provide a uniform 60-cycle frequency along the entire line, JNR installed two 60,000-kilovolt-ampere frequency converters (the largest ever built) near Tokyo. Power is delivered to a composite compound overhead catenary system at 25 kilovolts from each of 25 30,000-kilovolt-ampere substations spaced about 20 kilometers (12 miles) apart. Remote control of all 25 substations from a substation control

Trains
Trains
BIG THREE DIESEL CATALOG
6th ALL-DIESEL ISSUE!
HORSE SHOE
THE CASE FOR BALDWIN
Trains
IS THERE A FREIGHT CAR SHORTAGE? NO
—page 44
ALSO IN THIS ISSUE:
100 MPH PLUS ON THE MILW; PARLOR CAR EAST; PHOTO SECTION; CP'S KETTLE VALLEY
Trains
Trains
IN ONTARIO
THEY SPELL GO GO
Trains

center at Tokyo Station is accomplished by means of a transistorized centralized substation control (CSC) system.

Signaling and telecommunication

Easily the most advanced elements of JNR's New Tokaido Line are those contained in its signaling and telecommunication systems. Employing such recent developments in electronics as transistorized circuits, the NTL installation permits centralized control of the entire railway from a single control center located at Tokyo Station.

The principal features of the signal installation include automatic train control (ATC) and centralized traffic control (CTC) systems. There are no trackside signals on the NTL. Instead, the ATC system provides in the cab of each train a continuous indication of maximum permissible speed, depending upon the location of preceding trains and any restrictive track conditions, such as curvature or turnout positioning. Interconnection of cab signals and braking controls provides for automatic speed reduction to the permissible maximum. Coded ATC signals are received from track circuits by equipment installed on each train. ATC transmission and receiving equipment is located in each of 29 trackside equipment houses spaced at intervals of about 20 kilometers (12 miles). Signals are transmitted to track circuits by means of cables buried between tracks.

The New Tokaido Line's CTC installation provides the central control office at Tokyo with a visual indication of the location and number of every train on the line, as well as an indication of the setting of all turnouts. Although routes on the entire line can be set from Tokyo by remote control, NTL normally functions with an automatic route-setting system which utilizes coded signals from trains to automatically set routes through stations according to the class of train. Other equipment that aids CTC dispatching includes a device mounted on each train which transmits the train number by means of a coded signal, a train position recorder, wind velocity indicators, and a signal supervising panel.

Further control and signaling equipment encompasses that which is necessary to dispatch trains safely by a telephone block system in the event of ATC failure, a tunnel warning device that sounds a bell in tunnels to warn workers of approaching trains, a train protection apparatus which permits an employee anywhere along the line to bring trains to a stop if track defects are discovered, and an assortment of other special-purpose equipment.

An ultra-high-frequency train radio-telephone installation supplies communication to and from trains or between trains for both dispatching purposes and a public train telephone service. By means of a system of boosting stations, tunnel-mounted cables, and amplifiers, NTL can maintain continuous radio-telephone communication even in tunnels. The installation comprises four trackside control stations which in turn control the operation of 27 base stations.

A girl waits for train on the New Tokaido Line platforms in Tokyo Station, September 1965. William D. Middleton

NTL has, in addition to its radio telephone system, a wired communication system employing a 300-channel coaxial cable for a variety of telephone circuits, as well as control circuits for the line's CTC and CSC systems. A wayside telephone system and short range radio used for train control in yard areas are other communication equipment in use on NTL.

Rolling stock

Initial rolling stock for the New Tokaido Line included 360 multiple-unit passenger cars mass-produced by Japan's Hitachi Ltd. A further order of 120 cars was delivered during 1965. Although this equipment was designed for operation in trains of up to 16 cars, it is currently arranged into 12-car train sets, each made up of 2 first-class cars, 2 combination second-class coach-buffet cars, and 8 second-class cars for a total revenue seating capacity of 987 passengers.

In their overall size and configuration, the "Bullet" cars are similar to typical North American streamlined passenger equipment. Each car is a conventionally arranged 82-foot double-truck car with an open center-aisle seating arrangement. Second-class cars are provided with comfortable nonreclining seats in a 3-2 pattern with a maximum capacity of 110 passengers. First-class cars are furnished with luxurious reclining seats arranged in a somewhat roomier 2-2 pattern accommodating either 64 or 68 passengers. Buffet sections, which take up roughly half the length of cars, have a longitudinal stand-up counter along one side and swiveling molded plastic stools facing a narrow counter for sit-down meal service on the opposite side.

Each car is equipped with 7 to 11 unit-type air conditioners mounted above the ceiling. Employing the heat pump principle, the units double as heaters during cold weather. Toilet and washroom facilities are grouped for each two cars. Fluorescent lamps illuminate interiors, and trains are equipped with a public address system.

Carbodies are fabricated of welded high-tensile steel, making maximum use of lightweight alloys and plastics wherever possible to reduce weight. Use was made of a rigid polyurethane foam insulation in floors and side walls for both temperature and sound insulation. Couplers are a fully automatic tightlock type employing rubber buffing. Air-operated sliding entrance doors are furnished at both car ends.

JNR's research program leading up to design of NTL rolling stock encompassed wind tunnel tests aimed at developing the most efficient aerodynamic shape for both the cross section of cars and the front-end shape. As a result of these tests the cars were designed with slightly bulging sides and deep skirts below the floor level, and head-end cars were given the dramatic bullet-nosed shape that gave the railway its "Bullet Line" nickname. To effectively deal with any obstructions, head-end cars are fitted with a streamlined pilot assembled from six thicknesses of ⅝-inch steel plate.

In its testing program of six prototype cars which commenced in 1962, JNR determined that operation through tunnels at extremely high speeds brought about sharp increases in interior air pressure which resulted in ear discomfort to passengers.

To overcome this effect, production equipment was designed for air-tight construction. Compressed-air cylinders are used to force entrance and vestibule doors snugly against door frames to obtain an air-tight seal. Automatic shutters, actuated by trackside signaling devices, are utilized to close roof-top ventilating openings when a train approaches a tunnel. A reverse operation automatically takes place when the train leaves the tunnel.

After testing eight prototype high-speed trucks for its NTL equipment, JNR adopted its "IS" type, an 8'-2½" wheelbase four-wheel truck incorporating roller bearings, rubber cushioning, and diaphragm-type air springs.

Buffet car staff relax prior to evening departure (Tokyo to Osaka) on New Tokaido Line. William D. Middleton

Two traction motors are mounted on each truck.

Each set of electrical equipment is divided between two permanently coupled cars. One car carries a pantograph, circuit breaker, arrester, 1650-kilovolt-ampere transformer, and a 1500-kilowatt silicon rectifier which produces direct current for the traction motors. The other car carries the DC control equipment, including a main controller and main resistors. Traction motors are 415-volt direct current connected four in series and two in parallel with an output of 185 kilowatts. Control is provided by 25-step tap-changing on the low-voltage side of the main transformer. Other equipment: a motor generator and inverter for various auxiliary and control purposes, blowers, and an air compressor.

Braking on NTL trains is both dual dynamic and mechanical. At speeds above 50 km/hr (30 mph) dynamic (electrical) braking is employed. Below that speed, air-operated disk brakes take over.

Maintenance

To insure high equipment utilization, as well as the high order of reliability and safety required for 2-mile-a-minute railroading, JNR has fitted the New Tokaido Line with comprehensive maintenance facilities.

Two operating bases, at Tokyo and Osaka, possess storage, servicing, inspection, and limited repair facilities for NTL trains. Working under a utilization plan that allows only about 5% spare equipment (approximately half the spare-equipment ratio anywhere else on JNR), these two bases must concentrate almost all routine servicing and inspection in the late night period when no NTL trains are operated.

Typically, after completing anywhere from 1½ to 2½ round trips between Tokyo and Osaka, a train is returned to one of the bases at the end of the day for thorough cleaning and servicing and a daily inspection of running gear and principal components. A more detailed inspection is made monthly, and after each 200,000 kilometers (about 124,000 miles) of running, trucks are removed and subjected to thorough examination. Whenever wheel grinding is required, the Osaka base can do the job on an entire train without removing trucks or even uncoupling cars. More involved repairs and overhaul of NTL equipment are carried out at the Hamamatsu Shop about midway between Tokyo and Osaka.

The Bullet Line's electrical system and track get equally attentive inspection and upkeep. One of the key items in NTL's electrical maintenance program is a four-car electric test train converted from one of the two 1962 prototype trains. With such special devices as measurement pantographs, overhead observation domes, and television cameras, the train can give a continuous indication of overhead wire condition, current feeding characteristics, ATC track circuit characteristics, and performance of train radio equipment. Running weekly over the entire line at passenger train speeds, the train supplies data for NTL's continuing maintenance program.

Special high-speed track inspection cars, capable of continuously recording a multiplicity of data concerning track conditions, help JNR with track maintenance. Two such cars cover the entire line weekly, and a supersonic rail inspection car checks rail condition at least once a year.

In order to maintain its high standard of track on the New Tokaido Line, JNR has set up a cycle that calls for track resurfacing and realigning every four months, ballast tamping twice a year, fastening renewal at one- to five-year intervals, and complete renewal of rails, ties, and ballast every 10 years.

Track and power-system maintenance must be confined to the nighttime period when no NTL trains are on the line.

Some super-railroad impressions

INTENT ON GAINING a firsthand impression of 2-mile-a-minute railroading, I joined the crowds heading for the New Tokaido Line platforms at JNR's Tokyo Central Station one morning early last September. A first-

Trains
Trains
Trains
Trains
BN bows in
BURLINGTON NORTHERN
DENVER UNION STATION: from Gould to the CZ
Trains
Trains
SANTA FE

class basic ticket, super-express supplement, and seat reservation entitled me to a first-class seat on *Hikari* super express No. 9. Scheduled for a 10 a.m. departure, No. 9 was carded between Tokyo and Osaka in 4 hours flat, with intermediate stops at Nagoya and Kyoto. (Since Nov. 1, JNR has cut *Hikari* running times to 3 hours 10 minutes for the 320-mile journey.)

The M.U. train waiting at track 17 was arranged in the 12-car consist standard for all NTL trains. First-class accommodations were located mid-train in cars 7 and 8 (cars are numbered from the Osaka end). The remainder of the train was given over to second-class coaches; buffet sections took up approximately half the length of cars 5 and 9. Except for luggage racks in each car and small luggage compartments in first-class coaches, no baggage space is provided on the Bullet Trains; checked baggage moves in narrow-gauge trains on the old Tokaido line. A bullet-nosed head-end car at each end of the train (plus reversible seating) permits a quick turn-around at terminals.

In their design of NTL rolling stock, Japan's railcar engineers, who have come up with some noteworthy M.U. equipment styling in recent years, outdid themselves. The gleaming trains, finished in a handsome blue-and-ivory color scheme, present an almost unbroken appearance. Resembling a cross between the wingless fuselage of a jet airliner and Union Pacific's M-10000 of 1934, the head-end cars are easily the trains' most striking feature. A high cab surmounts the car's protruding bullet nose which is fitted with a rakish pilot. Recessed twin headlights flank the fiber-glass disk capping the nose. The translucent disk, which is removable to expose an emergency drawbar, glows eerily at night with reflected light from the headlights.

Perhaps as much for their dramatic appearance as for their breath-taking performance, the Bullet Trains seem to have captured the fancy of the Japanese public in a manner unlike anything we've seen in our own country since the advent of the first streamliners and perhaps not even then.

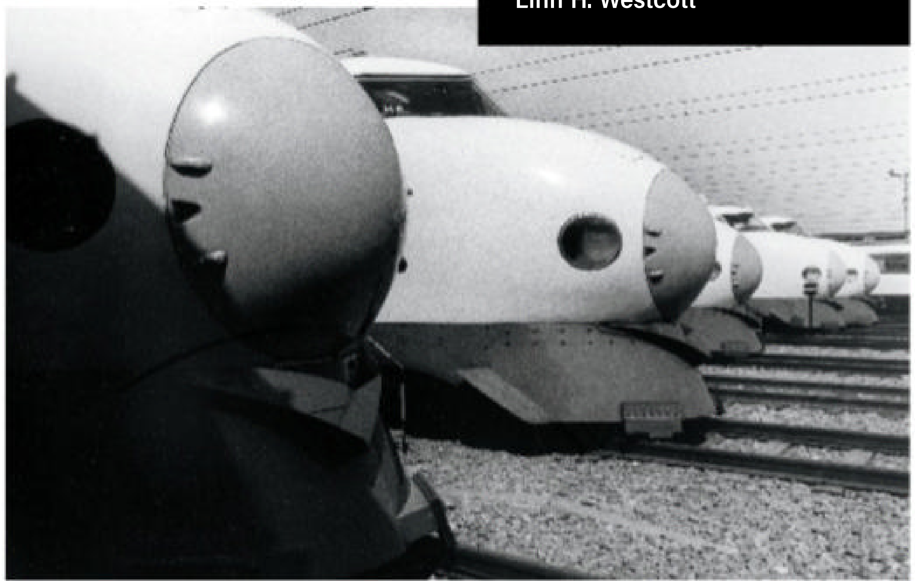
In the contest that selected the *Hikari* and *Kodama* names for NTL schedules, JNR drew an avalanche of more than 700,000 entries. At almost every departure time small children are brought forth to admire the handsome trains, and there's a steady stream of prospective passengers smilingly posing for snapshots beside the bullet-nosed head end. Japanese toy stores abound with Bullet Train picture books and toy facsimiles that range from plastic pull trains for the toddlers to battery-operated tinplate versions for the older age group. In perhaps the ultimate accolade, the ad agency for one brand of Japanese cigarettes has forsaken the customary airline pilot or ship captain in endorsement posters in favor of a smartly uniformed NTL trainman puffing contentedly on the sponsor's product while a Bullet Train races by in the background.

My Bullet Train accommodations proved to be exceptionally comfortable. The first-class coach was finished in beige and wood-grained plastic paneling, with a light gray ceiling in which were mounted continuous strips of bright fluorescent lighting. Windows were curtained in a dark blue material, and the aisle was laid with heavy blue carpeting. The roomy deep-cushioned reclining seats were upholstered in a gold material, fitted with spotless white linen antimacassars and arm rests, and equipped with adjustable foot rests and small tables that folded out of the arm rests.

Second-class Bullet Train accommodations, which I sampled on subsequent trips, are somewhat less luxurious. Seats are nonreclining and, by virtue of closer spacing and their 3-2 arrangement, considerably snugger than first-class (overall, seating density in second-class spaces is nearly half that in first-class cars). There's no carpeting, and the upholstery is a plainer blue-and-gray material. Otherwise, the cars are outfitted about the same as the first-class equipment. Everything on the bullet train is air conditioned.

As departure time neared, *Hikari* No. 9's dozen cars had filled almost to capacity. A warning bell clanged on the platform, air-operated doors hissed shut, and platform visitors waved and bowed low to departing friends. Precisely at 10 the motorman began feeding direct current to 48 hungry traction motors, and almost imperceptibly we moved away from the platforms.

Threading its way through downtown Tokyo on the New Tokaido Line's high elevated structure, the bullet-nosed *Hikari* paralleled JNR's narrow-gauge tracks on which multi-colored M.U. trains from the Tokyo suburban lines shuttled to and fro with their commuter cargoes. The public address system came to life with a musical flourish, and a lovely feminine voice (prerecorded I later decided when the same girl seemed to show up on every train I rode) welcomed us aboard and announced with utter assurance that we would (no hedging "are scheduled to") stop at Nagoya at 12:29 p.m., Kyoto at 1:34 p.m., and arrive at Shin-Osaka at 2 p.m. So confident is JNR in its time keeping ability, I learned from the pocket folder distributed to NTL passengers, that the railway would refund the full price of my super-express supplemental fare should the Bullet Train be delayed an hour or more in reaching its destination.



A neatly parked row of Bullet Trains ready and willing to take the next journey.
Linn H. Westcott

A conductor and his assistant, white-gloved and smartly attired in blue-gray uniforms, bowed and politely asked to examine my tickets. Briefly *Hikari* No. 9 paralleled the new Tokyo Airport monorail, dropped to ground level as we passed NTL's Tokyo railcar depot and the big Shinagawa engine terminal and coach yard, then climbed back to elevated structure — built over a JNR narrow-gauge freight line — to provide a rooftop view of Tokyo's disordered sprawl.

Up to this point, New Tokaido Line speed had been moderate, but as we left the city behind, JNR began to deliver what I'd come for.

What's it like to travel at 130 mph by train?

The answer: on the Bullet Line at least, not much different from riding on any other train at half the speed. Outside, the scenery of the hilly countryside west of Tokyo began to blur past the double-paned window, but otherwise there was far less sensation of speed than I had expected. Thanks to NTL's super-smooth roadbed and welded rail, rubber cushioning, air springs, and extremely effective sound insulation, the bullet train seemed to float serenely along with remarkably little noise or jostling and only the slightest hum from the spinning traction motors. Entry into tunnels, even at maximum speed, was marked only by a barely noticeable increase in air pressure.

Taking advantage of arrangements made with JNR, I moved forward to a vantage point beside *Hikari's* motorman. Even here I found it difficult to accept the speedometer's 210 km/hr figure; the high cab and protruding nose tended to minimize the dizzying sensation of ties unreeling in front of me at 130 mph. Only when an opposing train loomed up in the distance and plunged toward us at a breath taking relative speed of 260 mph did I gain the full impact of Bullet Line speed.

Hikari's youthful motorman, selected only after thorough psychological and physical testing, and carefully trained, was all business as he gripped the train's controls and watched for the slightest irregularity. Occasionally a warning bell clanged and the ATC panel in front of him flashed a speed restriction as *Hikari* entered a block in which break-in speed limitations were still in force. Automatically, the ATC-controlled dynamic braking decelerated the train until the new limit was reached. Starting and acceleration, however, are under the motorman's control.

The scenery naturally moves by rather rapidly, but New Tokaido Line passengers still get a splendid panorama of central Honshu. Much of the time, when it isn't in one of the 66 tunnels that comprise over a tenth of NTL mileage, the Bullet Line is above ground level on fill or elevated structure, affording a clear view of the well-ordered fields and rice paddies of the Japanese countryside.

Between Odawara and Atami, *Hikari* dived in and out of one tunnel after another as the line followed the mountainous Pacific coast. Atami, a resort city popular with Tokyoites, was glimpsed briefly before *Hikari* plunged into the long New Tanna Tunnel. Ordinarily at about this point bullet train riders get a splendid view of Japan's renowned Mount Fuji, but all I could see were heavy mists that shrouded the great volcano on this particular September morning.

Neatly trimmed hedgerow-like tea plants sped by the windows as we approached Shizuoka. According to the attractive "Train Window Panoramas" folder JNR distributes to NTL passengers, the Shizuoka area produces most of Japan's tea, not to mention strawberries. At Hamamatsu, some 160 miles and not quite 2 hours out of Tokyo, we were due to overtake *Kodama* limited express No. 107 which had preceded us out of Tokyo by a half hour. Safely in the clear, the *Kodama* waited in the stopping track as we shot through the station's center through track with undiminished speed.

Bullet Train shoots by Mount Fuji on the New Tokaido Line in the 1960s.
Japanese National Railways

BY NOW IT was time for lunch, and I headed back to the forward buffet car. I took a seat at the narrow counter facing the windows and ordered a spaghetti lunch, coffee, and a bottle of Japanese black beer. The meal catered on *Hikari* No. 9 by Tokyo's Imperial Hotel — was good, and the price moderate (380 yen, or a little over $1 — no tipping allowed). A big speedometer on the end wall indicated we were doing 200 km/hr (124 mph), and a device above the door at the opposite end of the buffet which indicated the train's position on a strip map of its route by means of a moving red thermometer-like line kept buffet patrons posted on *Hikari's* progress.

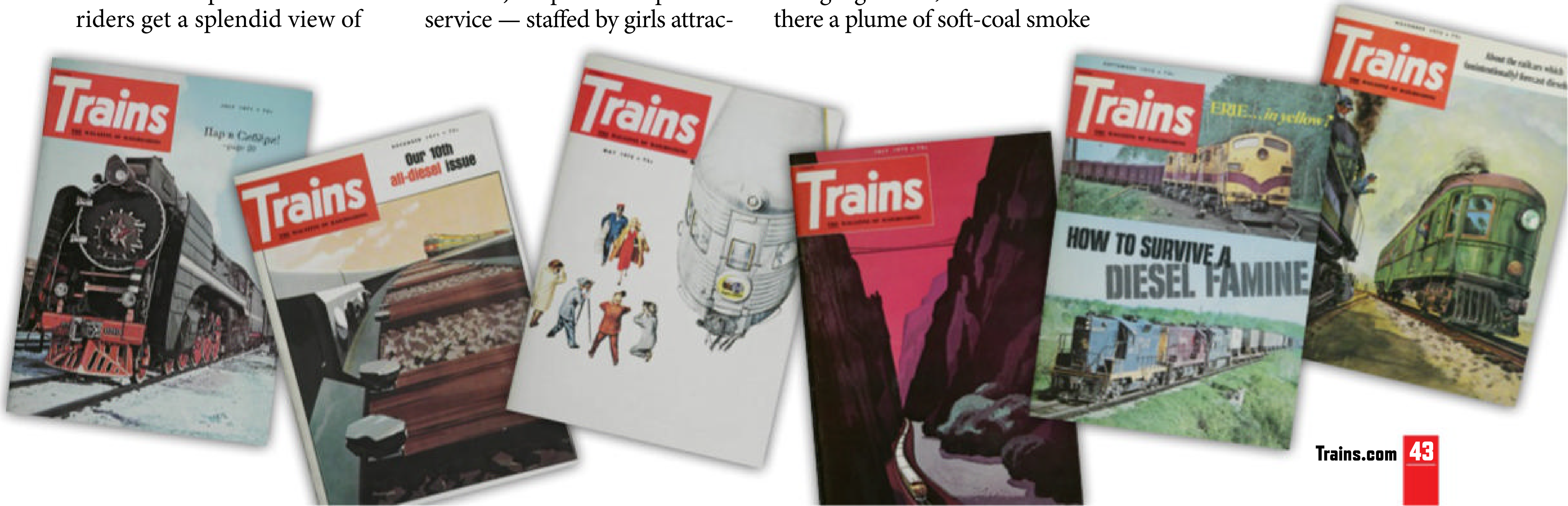
For the economy-minded traveler JNR provides a pushcart service — staffed by girls attractively outfitted in gray and white uniforms — from which you can buy anything from boxed meals, tea, and cold drinks, to cigarettes and magazines, or even, if you're so inclined, a flask of Japanese whiskey.

While I lunched, *Hikari* had crossed Lake Hamana, where my Japanese companion had pointed out the eel-raising beds for which the lake is famous; had raced through the silk center of Toyohashi; and was now streaking past Nagoya's steel mills and heavy industry on the elevated structure that carries Bullet Line trains to their downtown station.

On the dot of 12:29 p.m. *Hikari* No. 9's disk brakes smoothly brought the big M.U. cars to a halt beside the platforms paralleling those of the adjacent old Tokaido line. Electric power dominated the narrow-gauge scene, but here and there a plume of soft-coal smoke betrayed the presence of JNR steam power.

Moments later *Hikari* was off and running again. Now the route headed inland away from the Pacific coast and between two mountain ranges, through Gifu-Hashima and Maibara. In little more than an hour *Hikari* had covered the 90-odd miles between Nagoya and its Kyoto stop. Another high elevated structure afforded views of the ancient capital's celebrated temples. Below, green-and-cream trolleys clanged through crowded streets.

The last lap down the Yodo River valley into Shin-Osaka was run off in 26 minutes. Precisely on schedule at 2 p.m. *Hikari* nosed up to the bumpers of the elevated Shin-Osaka terminal, doors hissed open, and the bullet train's nearly 1,000 passengers streamed down the platforms to lower-level taxi stands, Osaka city subway platforms, or connections at ground level with JNR's San-yo line trains for western Japan. I



9574
9574
9574
CN
CN

In the beginning

Train crew befriends a 5-year-old fan

Story and photos by Sara Huebner

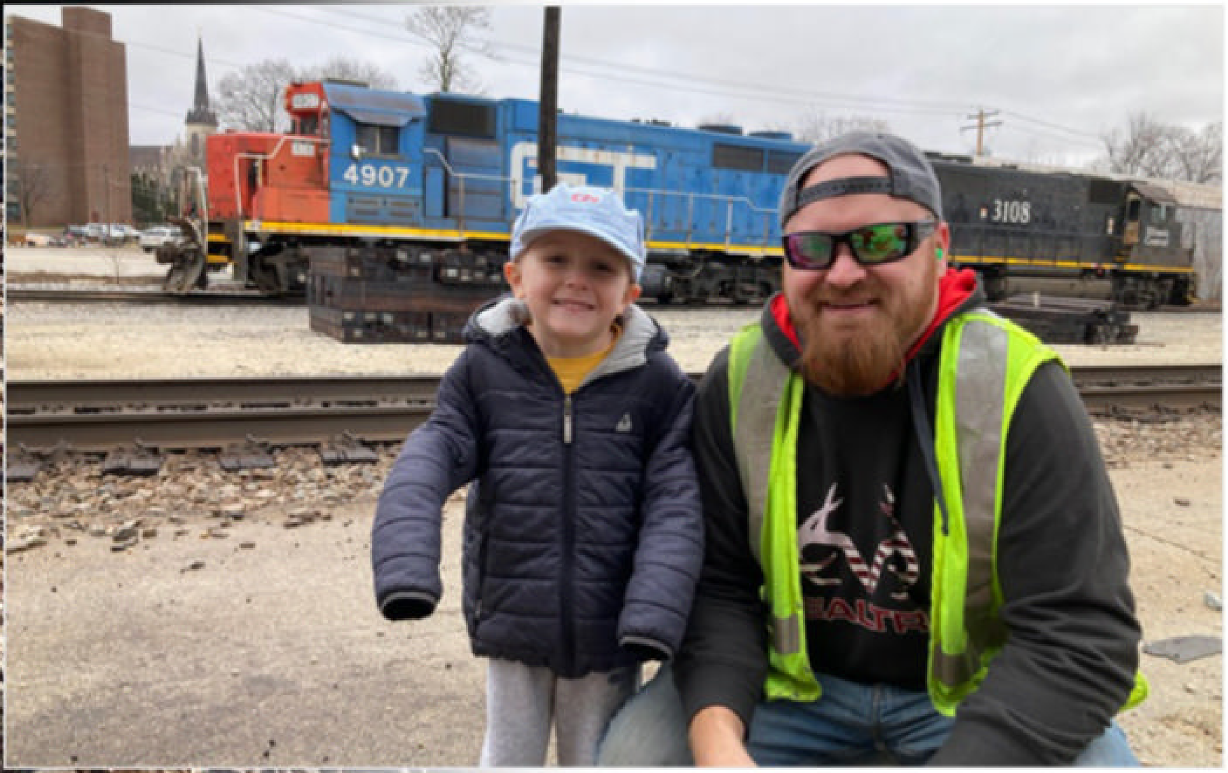
CN
www.cn.ca
SADES
14

MY 5-YEAR-OLD SON JAMES LOVES TRAINS MAGAZINE. His uncle gets the magazines and passes them on to James, who has been into trains since he was 3 years old. We have spent countless hours in our hometown of Waukesha, Wis., finding parks and public places near the tracks so he can safely watch passing trains.

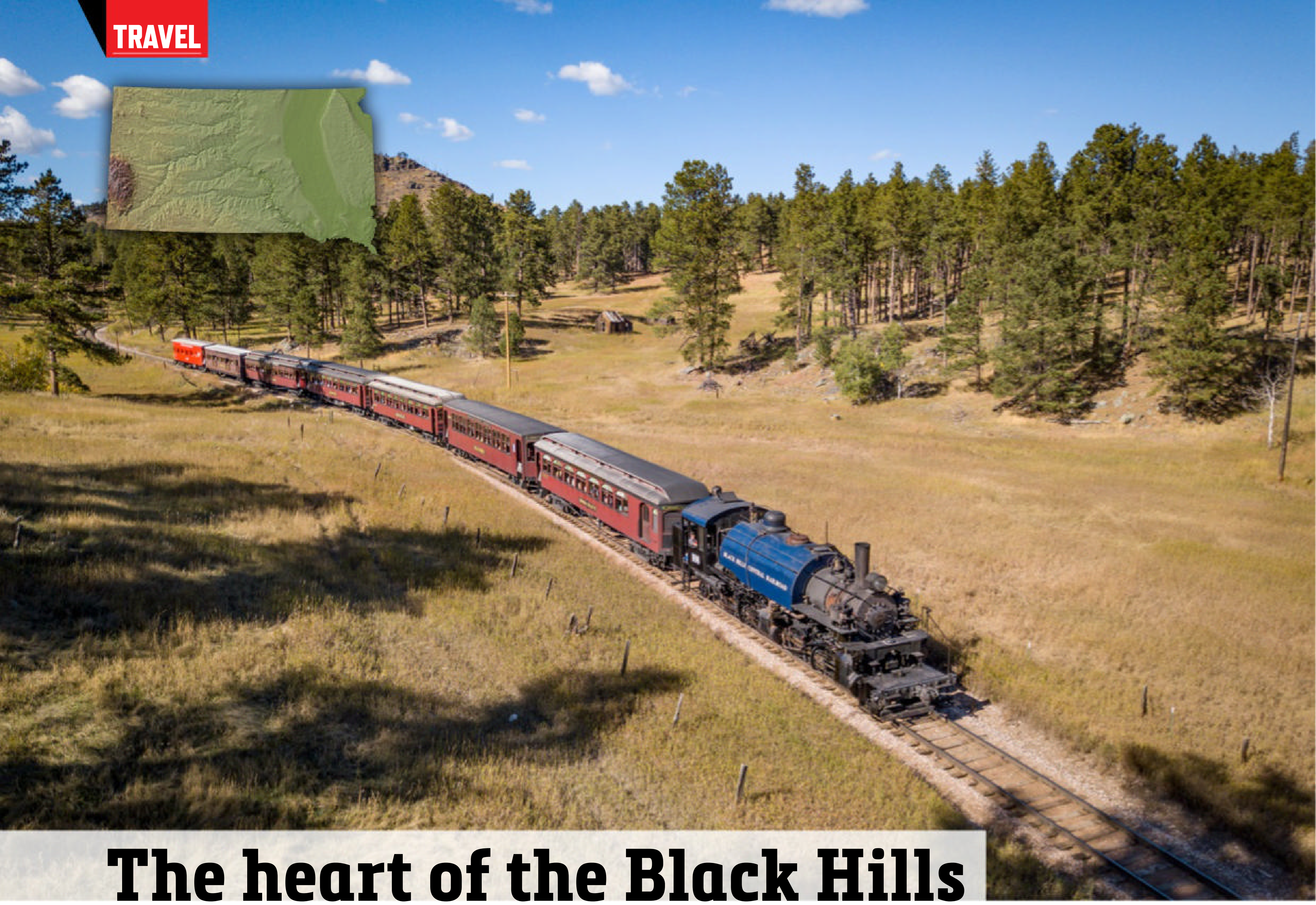
Hours and hours have been spent waiting for and looking at trains. We wait at Frame Park in Waukesha and see many Canadian National trains come through. We figured out a local crew's schedule and would go early on Tuesday mornings to see them at work. We saw them at the end of the day too.

There is a small rail yard in Waukesha and one day we were able to meet the crew there so my son could give "his" engineer an ornament he made. A week later, as the crew was switching cars and we were there to wave at them (my son loves having the horn blown specifically for him), the train came to a stop in front of us. The conductor climbed down and gave my son a bag of Canadian National-branded items (a hat, a yo-yo, stuffed animal, and pens).

Later that day we went to the yard to deliver thank-you notes to the crew. My son loves them and loves trains. This is just a cool story of two railroaders seeing my son almost daily, in rain, snow, and sunshine, and taking time to make his day.



Sporting his new Canadian National pin-striped hat, 5-year-old James Huebner poses with "his" CN engineer, Harrison Bingham, outside the Waukesha, Wis., yard. Almost every day, James and his mother, Sara, can be found in a Waukesha park or some other public space waiting a safe distance from the tracks for a train to pass. Some days, the wait is long, but James is patient knowing the reward will be a train rumbling along the tracks, a wave from the crew, and a friendly toot of the horn just for him.



The heart of the Black Hills

Black Hills Central is one of America's oldest active tourist railroads

▲ **Owned by Black Hills Central Railroad and built by Baldwin in 1926, 2-6-6-2T Mallet No. 108, winds through the Black Hills near Oblivion, S.D., on Oct. 2, 2021.** Blair Kooistra

SCAN THIS
Watch Black Hills Central trains in action!

THIS MAY SURPRISE YOU, but the Black Hills Central is one of America's oldest tourist railroads and today is among the most active steam railroads in the country. Best of all, it is one of the few places where you can see Mallet compound locomotives in action. From May through October, the railroad's *1880 Train* offers family-friendly scenic excursions on a 20-mile round trip between Hill City and Keystone, S.D., running several times daily.

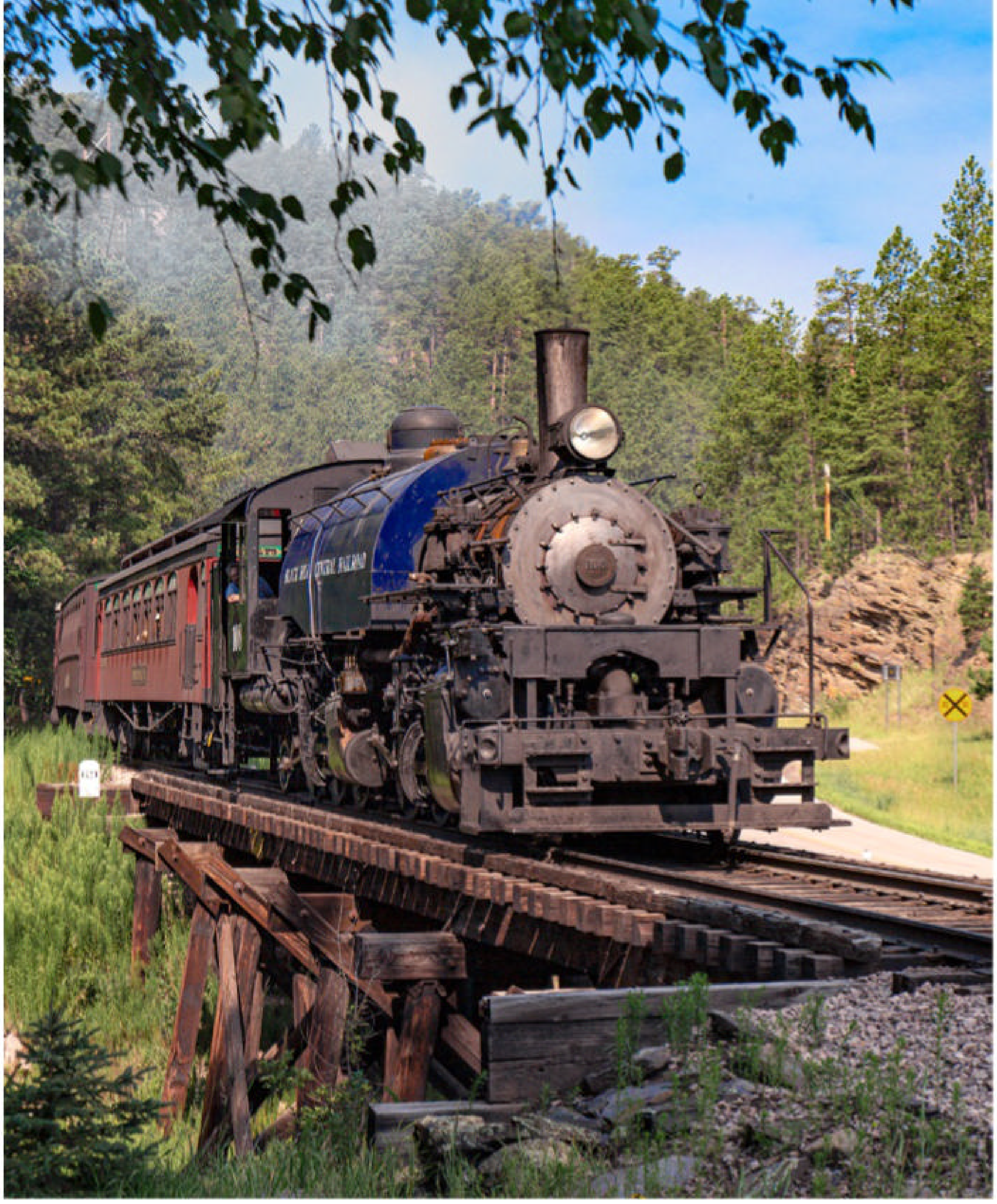
The railroad prides itself on steam operations and boasts of its variable itineraries that give visitors a choice of departure and return trips from stations at Hill City and Keystone at opposite ends of the line. Business Operations Manager Nate Anderson explains that the schedule "allows for maximum flexibility, and many families use the railroad as a tourist shuttle between the two popular towns." Hill City is the railroad's base of operations and is home to its shop, yard, and the location of a large parking lot for visitors.

Founded in the mid-1950s by William Heckman, this tourist line began as a narrow-gauge train on Chicago, Burlington & Quincy's Keystone Branch and gradually evolved into a standard-gauge steam operation. The line had primarily served as a branch off Burlington's Edgemont to Deadwood route to serve the Black Hills mining industry around Keystone.

In its early days, Heckman arranged with the Burlington to lay a third rail on this lightly used line between Hill City and the midway point to Keystone called Oblivion, where he built a wye to turn steam engines. In the early years, excursions were largely hauled by former White Pass & Yukon 2-8-0 No. 69. Operations expanded after purchase of 2-6-2 No. 7, a standard-gauge engine originally built for the Prescott & Northwestern.

Anderson relates that standard-gauge operations began in 1962, and for a brief time the railroad operated both narrow- and standard-gauge excursions enabling passengers to change trains at Oblivion. While narrow-gauge excursions ended in 1964, a vestige of the wye reminds visitors of the railroad's slim gauge days. Black Hills Central bought two additional locomotives in 1965: Nos. 103 and 104 are both former Peninsula Terminal 2-6-2Ts.

In 1990, after more than three decades, Black Hills Central was sold to the Warder



The Black Hills Central 2-6-6-2T Mallet No. 108 was restored to operation in 2020. Today, it can be seen hauling a tourist train between Hill City and Keystone, S.D. Kevin Gilliam

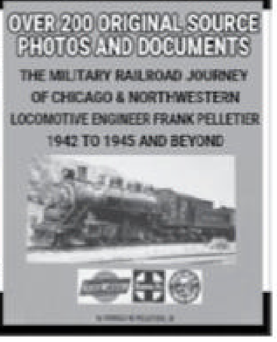
family, whom have operated the railroad ever since. They injected life and energy into the railroad, investing heavily in refurbishing equipment and tidying up the operation. The out-of-period bright colors that had adorned equipment during the 1970s and 1980s were replaced with more sedate traditional paint schemes. To grow the business, more powerful locomotives were purchased.

In 1999, the railroad bought 2-6-6-2T No. 110 from the Nevada State Railroad Museum and spent two years restoring it to operation. When completed in 2001, it was the only operational example of a Mallet compound in North America. This large saddle-tank logging engine is well-suited to the steep grades in the Black Hills, that in some places exceed a 5% climb. Where No. 104, which had been the primary motive power for many years, could haul just four passenger cars up the grade east from Hill City, No. 110 could handle seven cars. Success with this big engine led the railroad to acquire a second Baldwin 2-6-6-2T Mallet, No. 108, in 2015. Built by Baldwin in 1926 for the Potlatch Lumber Co. and later labored for the Weyerhaeuser Co., this engine had been displayed at the Northwest Railway Museum in Snoqualmie, Washington. Black Hills restored it to operation in 2020.

Locomotive No. 104 is retained for standby service and may occasionally fill in during the shoulder seasons. Old No. 7 is now a static display piece, typically presented at the north end of the short surviving section of the Deadwood line at Hill City. The locomotive is remembered for its starring roles in the long-running television show *Gun Smoke*, and in movies *Scandalous John* (Disney, 1971), and *Orphan Train* (made for CBS television in 1979), and still retains its Hollywood-inspired diamond stack from the former film.

The Black Hills Central serves a popular tourist area and people come to visit the nearby Mount Rushmore National Memorial (just a few miles from Keystone station) and the Crazy Horse Memorial (12 miles southwest of Hill City). When you visit Hill City, stop into the South Dakota State Railroad Museum adjacent to the railroad station. This features an enormous model railroad and railroad artifacts.

For museum admission information, visit www.sdrm.shop. *— Brian Solomon*



AN EPIC WARTIME TALE

ADVENTURE AND SURVIVAL ON THE WHITE PASS & YUKON RAILROAD DURING WWII

$68.75 - FREE SHIPPING!
(NY & CT residents must add sales tax)

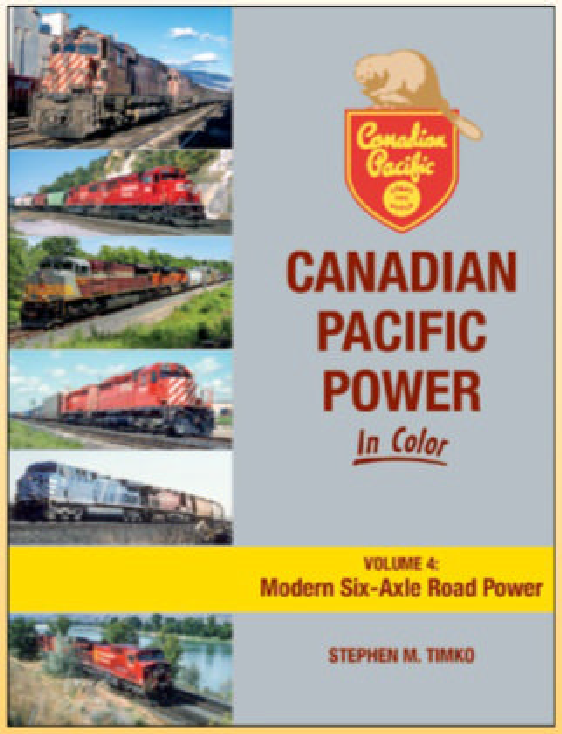
ORDER BY PHONE
914-967-7541

MAIL ORDER
Ron's Books
P.O. Box 714
Harrison NY 10528

SEARCH "Pelletier"
BUY ONLINE AT
www.ronsbooks.com

OVER 200 ORIGINAL SOURCE PHOTOS AND DOCUMENTS

THE MILITARY RAILROAD JOURNEY OF CHICAGO & NORTHWESTERN LOCOMOTIVE ENGINEER FRANK PELLETIER 1942 TO 1945 AND BEYOND



MORNING SUN BOOKS

August 1, 2023 Hardcover

CANADIAN PACIFIC POWER IN COLOR
VOLUME 4
MODERN SIX-AXLE ROAD POWER
By Stephen M. Timko Item # 1766

Available to Order Now!
Enter code PRE at checkout to get pre-order price of $59.95 each
(Regular price $69.95 each) / FREE Shipping in US
NJ res. add Sales Tax. Call (908) 806-6216
Morning Sun Books, Inc. c/o W&C,
1200 CR #523, Flemington, NJ 08822

MorningSunBooks.com

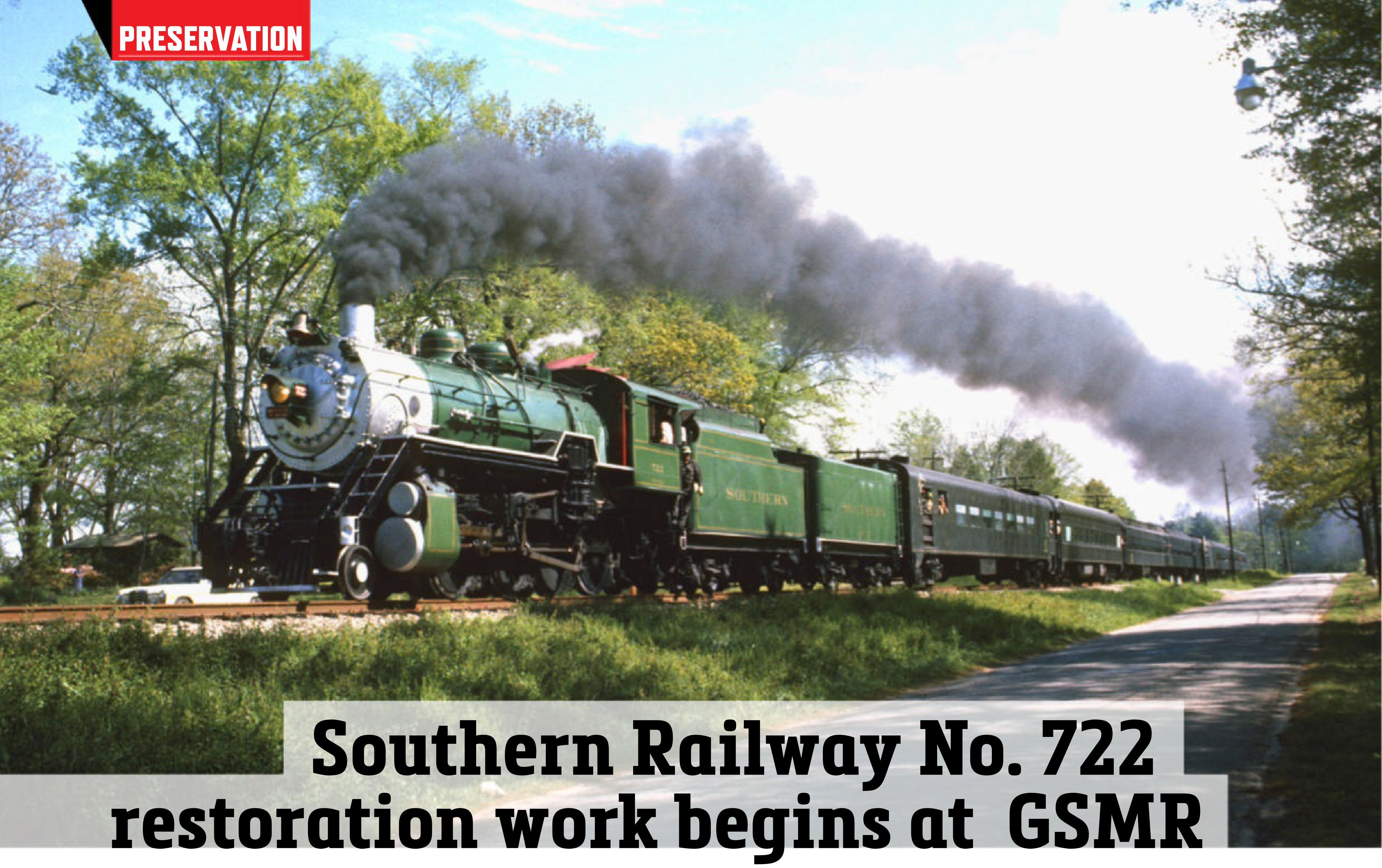
Don't Miss
a Single Issue!

Every issue is packed with:

- In-depth feature articles
- Preservation and railroad worker stories
- Ideas and insights
- News and analysis of industry trends and developments
- **and more!**

Subscribe Today!

Go to
www.Trains.com



Southern Railway No. 722 restoration work begins at GSMR

It will be the largest operating steam locomotive at Great Smoky Mountain Railroad

▲ **Running as part of the Southern Railway steam program, No. 722 leads an NRHS Atlanta Chapter excursion through Forsyth, Ga., on April 13, 1975. The locomotive, now owned by the Great Smoky Mountain Railroad, is being restored to operation. No. 722 should run again in early 2026.** Bill Schafer

THE GREAT SMOKY MOUNTAIN RAILROAD, Bryson City, N.C., announced it is beginning an operational restoration of Southern Railway No. 722, a 2-8-0 Consolidation built by Baldwin Locomotive Works in September 1904. The project is scheduled for completion in early 2026.

The locomotive, a Ks-1 class, built as a freight hauler, worked the Southern's Murphy Branch between Asheville and Murphy, N.C. When diesel power came to the branch in the early 1950s, No. 722 was sold to the East Tennessee & Western North Carolina Railroad. Here it was assigned to switching duties at Johnson City and Elizabethton, Tenn.

The Southern reacquired the locomotive in 1967 for use as part of the railroad's steam program. September 1980 saw the locomotive on loan to the Tennessee Valley Railroad Museum, where it ran until November 1985, when its boiler certification expired.

Next, Southern Railway successor Norfolk Southern moved the engine to Asheville, N.C., where it was displayed in the Biltmore neighborhood until 1999. Then it was moved to the Asheville roundhouse for storage.

GSMR acquired the locomotive in 2000 with the intent of returning it to operation.

Work on other locomotives delayed No. 722's restoration until this year. When complete, No. 722 will share excursion duties with GSMR's other well-known steam locomotive, No. 1702, an S160 2-8-0 Consolidation built for the U.S. Army by Baldwin in 1942. No. 722 will be the larger steam locomotive at GSMR, tipping the scales at 214,000 pounds. No. 1702 weighs in at 161,000 pounds. During the restoration, GSMR plans to convert No. 722 to an oil burner from its original coal fuel.

The Great Smoky Mountain Railroad is part of the American Heritage Railways group. AHR also owns and operates the Durango & Silverton Narrow Gauge Railroad.

The statement announcing the restoration project says: "American Heritage Railways is committed to the preservation of history — a passion of owners, the Harper family. AHR is committed to rebuilding steam locomotives for historic preservation and the enjoyment of future generations."

As part of this restoration, No. 722 will be painted in the Southern's famous green, gold, and silver paint scheme.

The route operated by the GSMR — Dillsboro to Andrews, N.C. — is a portion of the Southern's Murphy Branch. The line originally ran from Asheville 116 miles southwest to Murphy, N.C. When operational, No. 722 will again travel part of the line over which it originally worked.

To follow project updates and receive information, visit gsmr.com/category/722rebuild. — Trains *staff, GSMR*

Ex-CN 4-6-2 heads to Colebrookdale Railroad

Locomotive moved to Pennsylvania

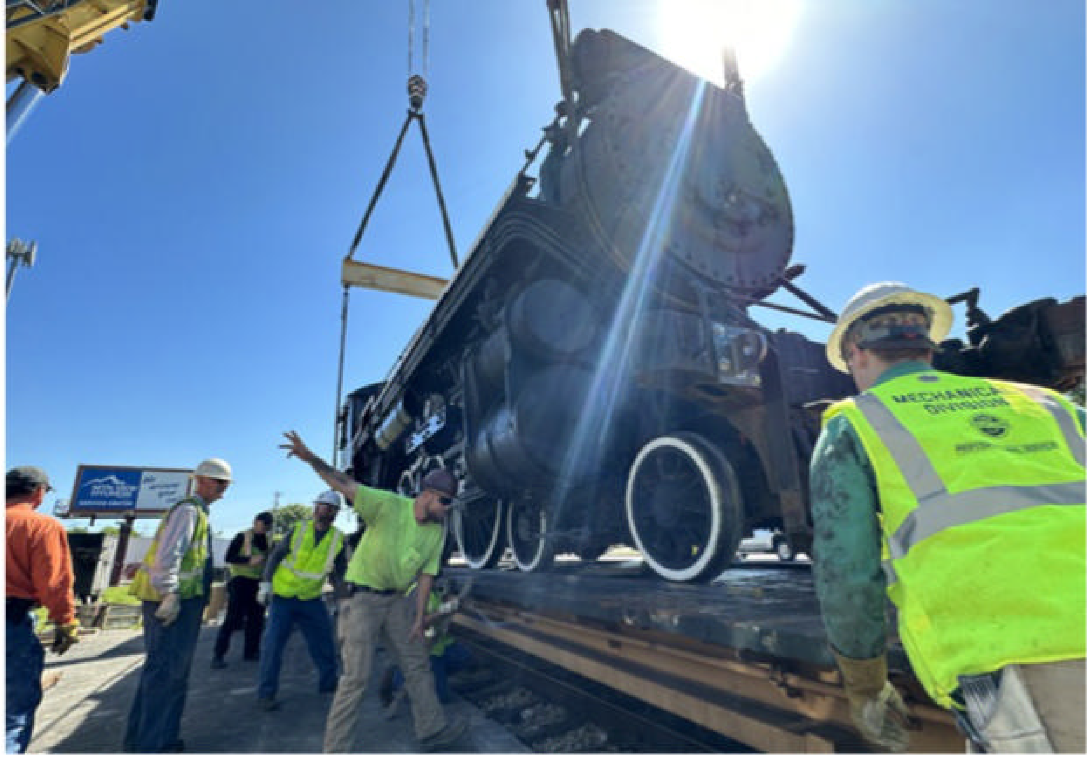
THE TENNESSEE VALLEY RAILROAD MUSEUM has transferred ownership of former Canadian National 4-6-2 No. 5288 to the Colebrookdale Railroad Preservation Trust in Boyertown, Pa.

In mid-May, railroad contractors FMW Solutions loaded No. 5288 for the move from Tennessee to Pennsylvania.

Built by Montreal Locomotive Works for the Canadian Government Railways in 1919, the locomotive was assigned to the Grand Trunk and then the Canadian National. It was retired in 1961 and sold to F. Nelson Blount of Steamtown USA in Vermont. The engine had been overhauled in 1957 and stored serviceable. After its move to Pennsylvania in the 1980s, the reorganized Steamtown rationalized its collection and, in 2001, transferred the engine to TVRM, where it was displayed outdoors.

"Over the past few years, TVRM carefully reviewed the current status and future possibilities for operation of the locomotive," Tim Andrews, TVRM president, says in a press release. "After being on outdoor display since arriving in 2001, the TVRM board determined that Colebrookdale could provide No. 5288 a broader range of options for the future." The museum remains dedicated to preservation and operation of steam locomotives, Andrews says, particularly those of regional significance.

Colebrookdale inquired about No. 5288 in 2020, and after carefully vetting the organization, TVRM's board agreed to the transfer in 2021. Since then, much discussion and planning for the move to Pennsylvania has taken place, according to Andrews.



FMW Solutions works to load ex-CN No. 5288 on a flatcar for the trip to the Colebrookdale Railroad in Pennsylvania. Kelly Lynch, FMW Solutions

Nathaniel Guest, CRPT executive director, tells *Trains* he is thrilled TVRM agreed to release the locomotive. "We plan to display the locomotive as a historic artifact, build a shelter to keep it out of the elements, and eventually restore it to operation," Guest says.

Colebrookdale tells the story of the "golden era" of passenger trains, from 1890 to 1920. "I'm captivated by the elegant passenger trains," Guest says. "Steam was always part of that experience, and we want to recreate an era and the look. The steam locomotive was a natural and authentic part of that picture."

No. 5288 is Colebrookdale's second Pacific type. The first, Grand Trunk Western No. 5030, is smaller and seven years older.

For more information, please visit:

- Colebrookdale Railroad: colebrookdalerailroad.com,
- Tennessee Valley Railroad Museum: tvrail.com. — Trains *staff*

Hallidie's invention still runs in San Francisco

Cable cars mark 150 years of service, carry millions of passengers annually

THE TIME WAS 4 A.M., AUG. 2, 1873. This was the beginning of the 150-year-long run for San Francisco's cable cars. The city is now celebrating Scotsman Andrew S. Hallidie's enterprise, which is not only a means of transportation, but a tourist attraction, and one of two street railways to be named a National Historic Landmark. (The second is St. Charles Streetcar line in New Orleans.)

Hallidie, an experienced maker of wire rope (steel cable), used his expertise to construct a cable car on San Francisco's Clay Street. He conceived of the cable car system in 1869, after watching how horses were whipped as they struggled to haul loads up the steep San Francisco hills, their hooves slipping on the wet cobblestones. Hallidie's goal was to surmount hills too steep for horse-drawn streetcars.

In May 1873, Hallidie entered into a partnership forming the Clay Street Hill Railroad. Construction began under a contract with the city permitting the railroad to run on the public streets so long as the line was operational by Aug. 1, 1873. The first test run was made at 4 a.m., Aug. 2, 1873 — 4 hours after the contract's specified time. The test, however, was an overwhelming success and the cable car received great public approval. Regular public service began on Sept. 1, 1873.

Hallidie's Clay Street Hill Railroad was not the only cable car company operating in San Francisco. From 1877 to 1889, seven additional cable car lines were built. After this building spree, the city had 53 miles of cable car track.

San Francisco's cable cars are an internationally recognized symbol of the city, carrying more than 5.7 million people annually. David Lustig

Today three lines remain: Powell-Mason, Powell-Hyde, and California Street. Although operated by the San Francisco Municipal Transportation Agency (MUNI) as part of the urban transport network, the cable car ridership is more tourist than local commuter. Tourists have been known to plug the system causing 2-hour-long boarding lines on some days.

For the balance of 2023, a coalition of 15 San Francisco organizations is helping mark the cable car anniversary with special events:

- **RIDE "BIG 19,"** the oldest and largest car, on the California Street line.
- **RIDE O'FARRELL, JONES & HYDE CAR NO. 42,** built in 1907, on the Hyde Street hill.
- **TOUR THE CABLE CAR CARPENTRY SHOP.** Here cable cars are restored and even built from the wheels up. This is the first time guided tours of the facility are being offered to the public.
- On **MUNI HERITAGE WEEKEND,** Sept. 23-24, rides on rarely operated historic cable cars, vintage buses, and streetcars will be offered.

More information on the cable cars and anniversary events is available at: sfcablecars.org. —*Bob Lettenberger*

RAILROAD ATTRACTION DIRECTORY

STEP BACK IN TIME to experience the golden age of railroading. North America's railroad museums and tourist lines provide affordable fun for the whole family! Plan your complete vacation with visits to these leading attractions. For information on advertising in this section, call Michael Wieloch at 262-798-6625.

CALIFORNIA **Fish Camp**

YOSEMITE MOUNTAIN SUGAR PINE RAILROAD

56001 Yosemite Highway 41

Ride "The Logger" steam train through the Sierra National Forest, featuring ex-West Side Lumber Company Shays #10 or #15. We are located near the south gate to Yosemite National Park. One-hour daytime trips and three-hour evening trains that include dinner and entertainment are offered. Open April through October.

YMSPRR.COM **559-683-7273**

CALIFORNIA **Perris**

SOUTHERN CALIFORNIA RAILWAY MUSEUM

2201 South A Street

The Southern California Railway Museum is home to vast collections of historic and vintage railway equipment and artifacts.

www.socalrailway.org **951-943-3020**

COLORADO **Georgetown**

GEORGETOWN LOOP RAILROAD

646 Loop Drive

Ride the Rockies with the Georgetown Loop Railroad April 8 through January 14.

Enjoy a step back in time with our steam engines. Add a mine tour with gold panning.

Our Special Events include: Wild West Days, Mother's, Father's, and Grandparent's Days,

Autumn and Pumpkin Fests, Fall Colors, and our famed Holiday Trains in November and December.

www.georgetownlooprr.com **1-888-456-6777**

Like us on Facebook!

facebook.com/TrainsMagazine

COLORADO **Golden**

COLORADO RAILROAD MUSEUM

17155 W 44th Avenue

Still on Track.
Colorado RAILROAD Museum

Colorado has a rich railroading heritage. We're "Still On Track" with that heritage at the Colorado Railroad Museum, one of the top 10 railroad museums in the U.S. See dozens of locomotives, passenger and freight cars, and more, including both narrow gauge and standard gauge. Open Tues-Sun with changing exhibits, HO and garden railway layouts, train rides most Saturdays with expanded summer dates (visit website for schedule).

ColoradoRailroadMuseum.org **303-279-4591**

COLORADO **Leadville**

LEADVILLE RAILROAD

326 East 7th

Open year around. Check our website for train schedules and upcoming specials. **NEW** this year holiday specials for friends and family. Raft and rail and zip and rail packages. Check out the website for updates on schedules, restrictions, and fun in the Rockies!

www.leadvillerailroad.com **1-866-386-3936**

FLORIDA **MILTON**

WEST FLORIDA RAILROAD MUSEUM

5003 Henry Street

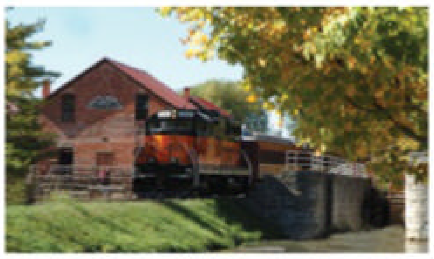
The Museum occupies the L&N Milton combination freight and passenger depot that was built in 1907-09 on the site of the original 1882 P&A depot. Unique to this museum is the relocated bridge tender's home, and the Globe Coffeehouse, one of the only Louisville and Nashville diners remaining. The Museum is open Wednesday to Saturday from 10:00 a.m. to 3:00 p.m. and other times by appointment for group tours.

www.wfrm.org **(850) 623-3645**

INDIANA **Connersville**

WHITEWATER VALLEY RAILROAD

5th and Grand



Travel through time on Indiana's most scenic railroad. 33-mile round trip to Metamora, May through Oct. Special events Feb through Dec. Vintage diesels: 1951 Lima-Ham. (2) 750 HP & 1000 HP, 1954 EMD/Milw. Rd. SD10, 1948 Alco S1, 1942 GE 65 Ton. Gift Shop.

www.whitewatervalleyrr.org **765-825-2054**

KANSAS **Abilene**

ABILENE & SMOKY VALLEY RAILROAD

200 SE Fifth Street

Thriving at 30! May-October. ATSF3415 WILL operate during 2023 and Enjoy our 11-mile round trip through the Smoky Hill River Valley. Diesel and Steam Trains, Dinner Trains, and Private Charters available. Find us on Facebook, our website or call us. Close to I-70.

www.asvrr.org **785-263-0177 or 263-0118**

KENTUCKY **New Haven**

KENTUCKY RAILWAY MUSEUM

136 S. Main St.

Small town America at its best...Journey on a 22 mile train excursion aboard L&N's historic Lebanon Branch. Slow down and discover the joy of traveling by train. Specialty trains include Dine By Rail, Train Robberies, and Christmas Trains. The Whistle Stop Shop has everything for the train enthusiast.

www.kyrail.org **800-272-0152**

KENTUCKY **Versailles**

BLUEGRASS SCENIC RAILROAD AND MUSEUM

175 Beasley Road

90-minute train rides through Central Kentucky Thoroughbred horse country.

Weekends May through October.

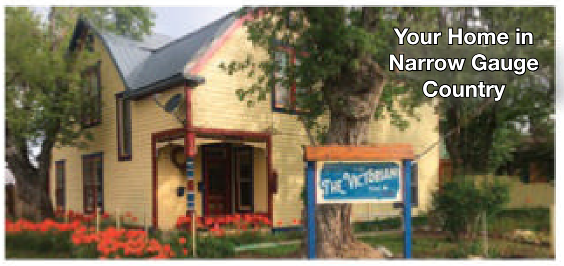
www.BluegrassRailroad.com **859-873-2476**

Check out **Trains.comOfficial** on YouTube!

NEW MEXICO **Chama**

THE VICTORIAN, BED & BREAKFAST

299 Maple Avenue



Situated in the historic district of Chama, NM and a short 5 minute walk to the C&TSRR. Enjoy free WiFi, gourmet breakfast, cable TV and private baths in each suite. Beautiful, relaxing Hot-Tub on the deck. This is the 1880's vintage home for your retreat from civilization.

www.thevictorianchama.com **575-756-2675**

OHIO **Cincinnati**

EnterTRAINment Junction

7379 Squire Court

Visit the World's Largest Indoor G-Scale Train Display with over 90 trains running in a huge 25,000sf display and learn about how the U.S. was changed by the railroads in the American Railroad Museum. There's even a train themed play area for the kids. Open 10 – 6 Monday thru Saturday & Noon - 6 on Sundays.

enterTRAINmentjunction.com **513-898-8000**

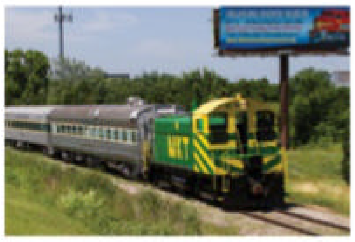
OKLAHOMA **Oklahoma City**

OKLAHOMA RAILWAY MUSEUM

3400 NE Grand Blvd

All Aboard !

Come for a ride on our historic railroad



Open Thur., Fri., Sat., 9:00-5:00. Rides on 1st & 3rd Sat. April through August. Trains leave the museum's Oakwood Depot at 9:15, 11:15, 1:15 & 3:15 for a 40 min. round trip on former M-K-T mainline in Okla. City. For info, birthday parties & other functions give us a call or visit our web site.

www.oklahomarailwaymuseum.org **405-424-8222**

PENNSYLVANIA **Marysville**

BRIDGEVIEW BED & BREAKFAST

810 S. Main St.

BRIDGEVIEW

At The Bridgeview B&B The action comes to you! Freight Trains are rolling in and out of Enola Yard right past our front porch. From the spacious decks and sitting room, you can watch the Susquehanna River, Blue Mountains and trains crossing World Famous Rockville Bridge, all in one spectacular panoramic view! Relax, in a comfortable, "home away from home" atmosphere at The Bridgeview, where we feature 10 clean, cozy rooms, all with private baths, A/C, WiFi, plus a freshly prepared breakfast to start your day! Visit Harrisburg, Hershey, Gettysburg, Adamstown and PA Dutch Country. See our website for more information, and give us a call. Come experience The Bridgeview Bed & Breakfast, where you never know, **what**, you might see next!!

www.bridgeviewbnb.com **717-957-2438**

For more,
visit Trains.com
today!

SOUTH CAROLINA **Greenwood**

THE RAILROAD HISTORICAL CENTER

908 South Main Street

SC Upstate's Largest Static Railroad Display!

From the 1906 Baldwin Steam Engine, to the 1914 Executive 'Carolina' car, you will see some of the most beautiful train restorations in the Southeast, including 3 of the existing 4 cars from the old P&N Railway, plus Pullman Passenger and Sleeper cars and the Erie Lackawanna Dining Car #746. Open every Saturday 10-4, May 7 through October 15, or call for tours at any time but Sunday.

Call today!

www.greenwoodrrmuseum.com **864-229-7093**

TEXAS **Rosenberg**

ROSENBERG RAILROAD MUSEUM

1921 Avenue F, Rosenberg, TX 77471

The Rosenberg Railroad Museum is dedicated to preservtion and education of railroading history and its impact on Fort Bend County. Exhibits Include 1970's Caboose, 1903 Tower 17, 1879 passenger car, Garden Railroad, model train layouts, and more! Open Wed-Fri. 10-3pm, Sat. 10-4pm, & Sunday 1-4 pm.

www.RosenbergRRMuseum.org **(281)633-2846**

WISCONSIN **Green Bay**

NATIONAL RAILROAD MUSEUM

2285 South Broadway

Explore dozens of historic trains and engaging exhibits at the National Railroad Museum, which is open year-round. Among our popular attractions are: the General Motors Aerotrain, Union Pacific "Big Boy" #4017, Pennsylvania Railroad GG-1 electric locomotive #4890, the Dwight D. Eisenhower A4 locomotive, and the world's largest collection of drumheads. Train rides are offered daily May-September (weekends in October).

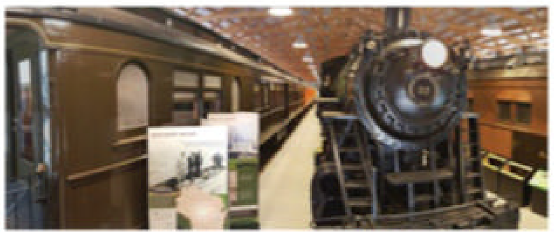
www.nationalrrmuseum.org **920-437-7623**

RIDE THE RAILS
TO INCREASED SALES!
To advertise,
call Michael Wieloch
today at 262-798-6625

WISCONSIN **North Freedom**

MID-CONTINENT RAILWAY MUSEUM

E8948 Museum Road



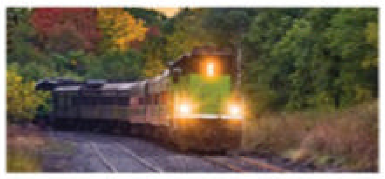
MCRM is home to one of the nation's largest collections of restored wooden passenger cars. Take a 55-minute, 7-mile round-trip ride aboard 1915-era coach cars. Open weekends May-Oct, daily except Mondays mid-June-Labor Day. Also, join us for delicious journeys aboard the Pizza Train (July 22nd and Sept. 23rd) and the BBQ Train (August 26th.)

www.midcontinent.org **800-930-1385**

WISCONSIN **Osceola**

OSCEOLA & ST. CROIX VALLEY RAILWAY

114 Depot Road, Osceola, WI 54020



OSCEOLA & RAILWAY ST. CROIX VALLEY

Join us for a scenic and memorable trip through the St. Croix Valley. Come for the 1920's-1950's passenger rail experience, the awesome scenery, or special events such as pizza or picnic trains, the popular Pumpkin Express, or our new Adventure Express with Trollhaugen Adventure Park. Individual, family and group tickets available. And visit the Minnesota Transportation Museum in Saint Paul to experience railroading history.

www.trainride.org **651-228-0263**

WISCONSIN **Trego**

WISCONSIN GREAT NORTHERN RAILROAD

N6639 Dilly Lake Road

America's Only Moving

BED & BREAKFAST DINNER TRAIN

The train departs Tuesday through Saturday evening at 5:30 May through December. The train features a queen bed, toilet, sink and shower in each sleeper deluxe suite. Enjoy cocktails in the lounge and then move to the diner for a scrumptious 4-course chef prepared meal from our onboard kitchen. When the train returns to the station, view the starlit sky while trading railroad tales with other passengers around our gas fire on the patio. Wake up to a hot breakfast in the diner. See the world famous *Mark Twain Zephyr* at Trego Depot!

www.spoonertrainride.com **715-635-3200**

When visiting
these attractions,
mention you saw
their ad in Trains!

CLASSIFIEDS

Word Rate: per issue: 1 insertion — $1.57 per word, 6 insertions — $1.47 per word, 12 insertions — $1.37 per word. $35.00 MINIMUM per ad. Payment must accompany ad. To receive the discount you must order and prepay for all ads at one time. Count all initials, single numbers, groups of numbers, names, address number, street number or name, city, state, zip, phone numbers each as one word. Example: Paul P. Potter, 2102 Pacific St., Waukesha, WI 53202 would count as 9 words.

All Copy: Set in standard 6 point type. First several words only set in bold face. If possible, ads should be sent typewritten and categorized to ensure accuracy.

CLOSING DATES: September 2023 closes June 19. October closes July 26, November closes August 22, December close September 27.

For TRAINS' private records, please furnish: a telephone number and when using a P.O. Box in your ad, a street address.

Send your ads to: Trains magazine – Classified Advertising
21027 Crossroads Circle, P.O. Box 1612 Waukesha, WI 53187-1612 Toll-free (888) 558-1544 Ext. 551
Fax: (262) 796-0126 E-mail: classads@kalmbach.com

RAIL SHOWS AND EVENTS

JULY 15, 2023: Rail Fair, Copeland Park, Rose & Clinton Streets, La Crosse, WI. 10am-4pm. Admission $5.00, under 12 free w/adult. Railroad Show, Sale & Exhibition. 608-781-9383 or 608-498-9522. www.4000foundation.org

AUGUST 5-6, 2023: Central Indiana Division/NMRA announces the Franklin Train Show. Johnson County Fairgrounds, 250 Fairground St., Franklin, IN 46131. Saturday 10am-4pm, Sunday 10am-3pm. Admission: $7/person, 16 and younger free w/adult. NMRA members (show membership card) $5/person. Demos, Displays, Operating Layouts, Door Prizes, Free Parking, Food available. Info/table rental: Michael Roderick, 317-833-3556, FranklinTrainShow@gmail.com or www.cidnmra.org

OCTOBER 15, 2023: 32nd Annual Chicago Railroadiana and Model Train Show. Sunday, 10:00am-3:00pm. Kane County Fairgrounds, 525 South Randall Rd., St. Charles, IL. Admission: $6.00 w/tax. Tables starting at $65.00. Information: 847-358-1185, RussFierce@aol.com or www.RRShows.com

All listed events were confirmed as active at the time of press. Please contact event sponsor for current status of the event.

LODGING

INN ON THE RIVER: Book your stay for a relaxing getaway overlooking the beautiful Mississippi! Guests are minutes from quaint restaurants, stores and many outdoor opportunities. Each room has a private balcony for stunning views of the Mississippi River and the Burlington Northern-Santa fe Rail Line. Reservations: 608-534-7784 www.innontheriverwi.com or email: innontheriverwi@gmail.com

COLLECTIBLES

TOP DOLLAR PAID for steam/diesel or electric builder plates. mr_slides@hotmail.com Telephone: 216-321-8446

TOP PRICES PAID for original steam, diesel and electric builder's and number plates. Have some quality plates for trade as well. rjmuldowney@comcast.net – 609-397-0293.

PHOTOS, PRINTS AND SLIDES

TOP DOLLAR PAID: for 35mm slide collections especially pre-1980. Mr. Slides, mr_slides@hotmail.com Telephone: 216-321-8446

RAILROAD ART

THE ESTATE OF WELL-KNOWN RAILROAD ARTIST, ANDREW HARMANTAS, is selling all remaining paintings from his collection. Paintings are of various railroads, steam, diesel, and various sizes. Majority are framed. Inquiries, visit www.andrewharmantasart.com

MISCELLANEOUS

RAILROAD PATCHES: Engineer caps with insignia. 1,000 designs. Catalog $5.00. Patch King, Box 145, York Harbor, ME 03911.

WANTED

ARE YOU GETTING THE BEST PRICE FOR YOUR TRAIN COLLECTION? Our list of discriminating buyers grows each day. They want bigger and better train collections to choose from! We specialize in O Gauge trains- Lionel, MTH, K-Line, Williams, Weaver, 3rd Rail, etc. as well as better trains in all scales. We also purchase store inventories. Plus, we can auction your trains with rates starting as low as 15%. We travel extensively all over the US. Give us a call today! Send us your list or contact us for more information at www.trainz.com/sell Trainz, 2740 Faith Industrial Dr., Buford, GA 30518, 866-285-5840, Scott@trainz.com Fax: 866-935-9504

ORIGINAL SLIDE COLLECTIONS, B&W Negative Collections, any railroads, any subjects. sales@morningsunbooks.com

PRR LW PULLMAN CAR Cast-iron door nameplates, 1938-1950. J.H. STEVENSON, Rocky River, OH 440-333-1092 jhstevenson8445@gmail.com

AUCTIONS

AMERICA'S PREMIER RAILROAD AUCTIONS: Consign your quality items. One piece to an entire collection. Large 8-1/2 X 11" auction catalogs contain full descriptions and hundreds of photographs. Auctions are jointly sponsored by the Depot Attic and Golden Spike Enterprises. The combined knowledge and experience of America's largest railroadiana firms will earn you "top dollar". Mail and fax bids are accepted. Information: Railroad Auction, PO Box 985, Land O Lakes, FL 34639. Phone: 813-949-7197.

GET MORE
of what you love with
Trains.com

ADVERTISERS

The Advertiser Index is provided as a service to TRAINS magazine readers. The magazine is not responsible for omissions or for typographical errors in names or page numbers.

Abilene & Smoky Valley Railroad........... 51
Big E Productions.................................. 5
Bluegrass Railroad Museum 50
Bridgeview Bed & Breakfast................. 51
Chicago Special Issue from Trains.......... 2
Colorado Railroad Museum 51
Cordele Main Street............................. 13
Don Pelletier....................................... 47
Durbin & Greenbrier Valley Railroad...... 11
EnterTRAINment Junction..................... 50
Gene Kuhn.. 13
Georgetown Loop 51
Great American Steam Locomotives DVDs . 5
Kentucky Railway Museum 50
Leadville Colorado &
  Southern Railroad Company................ 50
Mid-Continent Railway Historical Society ... 50
Minnesota Transportation Museum............ 51
Monte Vista Publishing 5
Morning Sun Books, Inc. 47
Mount Washington Cog Railway 11
National Railroad Museum.................... 51
Nevada Northern Railway Museum 60
New York Central Remembered.............. 2
Oklahoma Railway Museum 50
Railcom.. 5
Railroadbooks.biz 5
Ron's Books 5
Rosenberg Railroad Museum 51
Southern California Railway Museum 50
The Museum & Railroad Historical Center ... 51
The Victorian 50
Trains All Access 53
West Florida Railroad Museum.............. 50
Western Pacific Railroad Museum 13
Whitewater Valley Railroad 51
Wisconsin Great Northern Railroad 51
Yosemite Mountain Sugar Pine Railroad... 51

In the September issue

Alaska RR turns 100

One-hundred years have passed since the driving of the **ALASKA RAILROAD'S** golden spike, an essential transportation link in the 49th state. On patrol with **AMTRAK'S K-9 UNIT**, railroading's best friends. The future is bright for Alberta's grain-hauling **BATTLE RIVER RAILWAY**. A memorable ride on a Duluth, Missabe & Iron Range **2-8-8-4 YELLOWSTONE**. Counting down to the 1,000th issue with the **BEST OF TRAINS**.

On sale August 8, 2023

ALL ABOARD WITH

Trains ALL ACCESS

JUST **$4.99** PER MONTH

Unlock access to current and historical trains and railroading content on Trains.com for the railfan and industry insider. With *Trains* All Access, you'll get:

Trains
ALL ACCESS
MEMBER ARCHIVES

ARCHIVE ACCESS
Full access to every issue of *Trains* and *Classic Trains* magazines in the Trains.com archive – 80+ years of issues!

NEWS WIRE and PHOTO OF THE DAY
The most timely and comprehensive coverage of railroad industry news, plus access to our library of historic railroad and trains photos.

FIND IT ALL ON...
NEWS WIRE »»»

Trains LIVE

TRAINS LIVE, ASK TRAINS.COM,
and Q&A WITH THE EDITORS VIDEOS
Watch exclusive video series that cover preservation topics, address your railroading and modeling questions, take you behind the scenes with our editorial staff, and more.

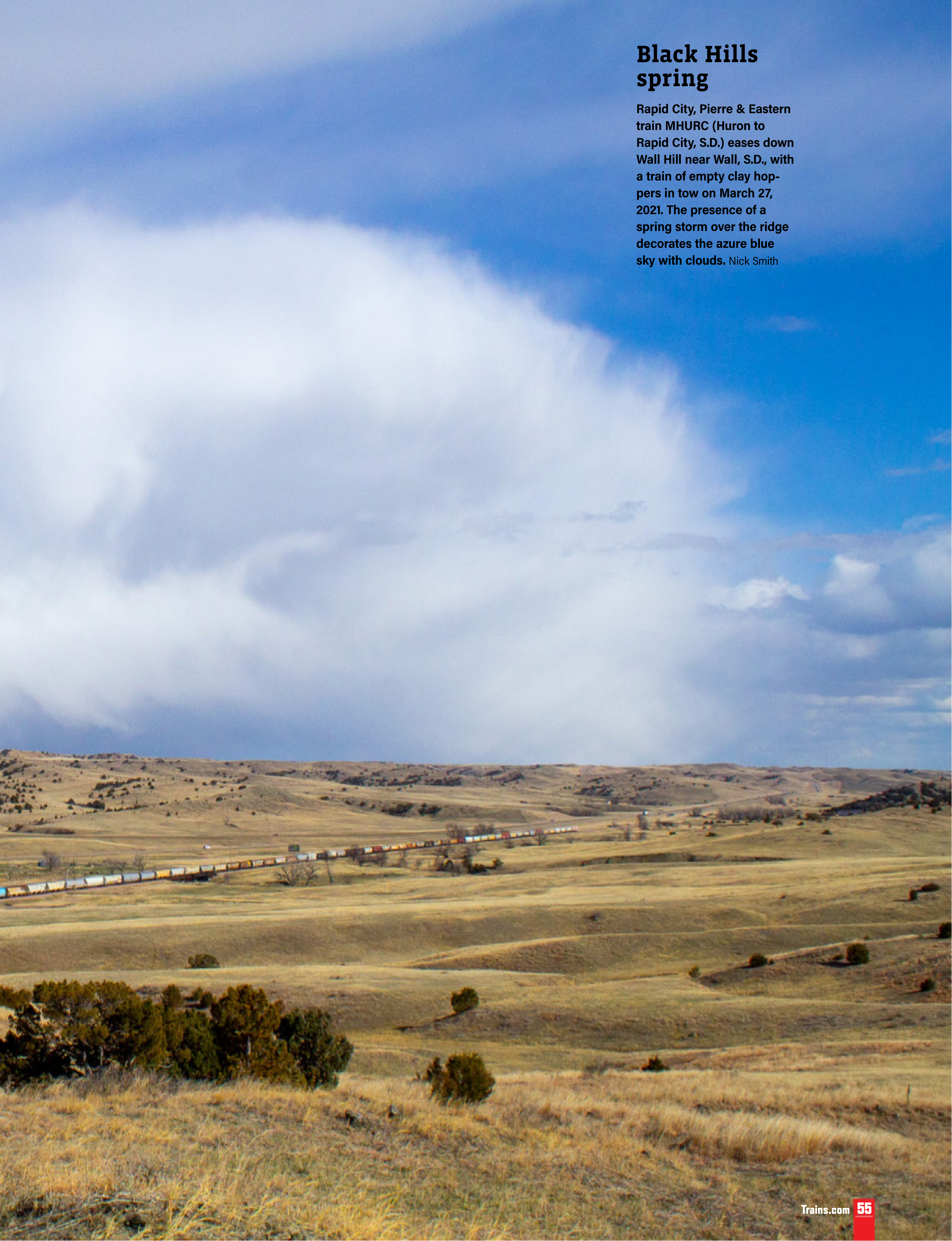
GET TRAINS ALL ACCESS:
www.trains.com/trn/subscription-plans

SCAN TO LEARN MORE

trains.com

Trains | Model Railroader | CLASSIC TOY TRAINS | Classic Trains | Garden RAILWAYS | trains.com VIDEO

THE BEST IN MODELING & RAILROADS • ALL IN ONE STOP!

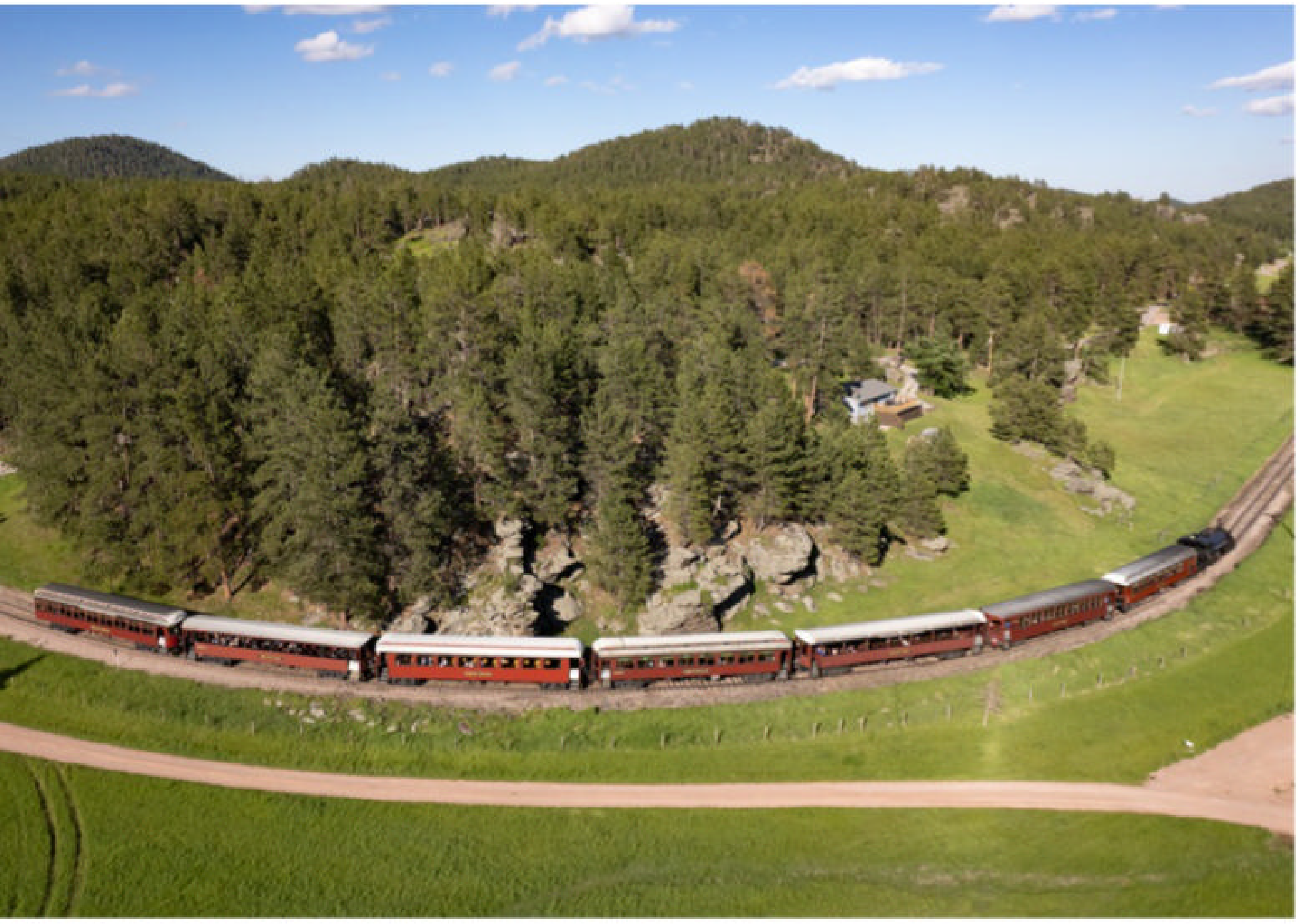


Black Hills spring

Rapid City, Pierre & Eastern train MHURC (Huron to Rapid City, S.D.) eases down Wall Hill near Wall, S.D., with a train of empty clay hoppers in tow on March 27, 2021. The presence of a spring storm over the ridge decorates the azure blue sky with clouds. Nick Smith

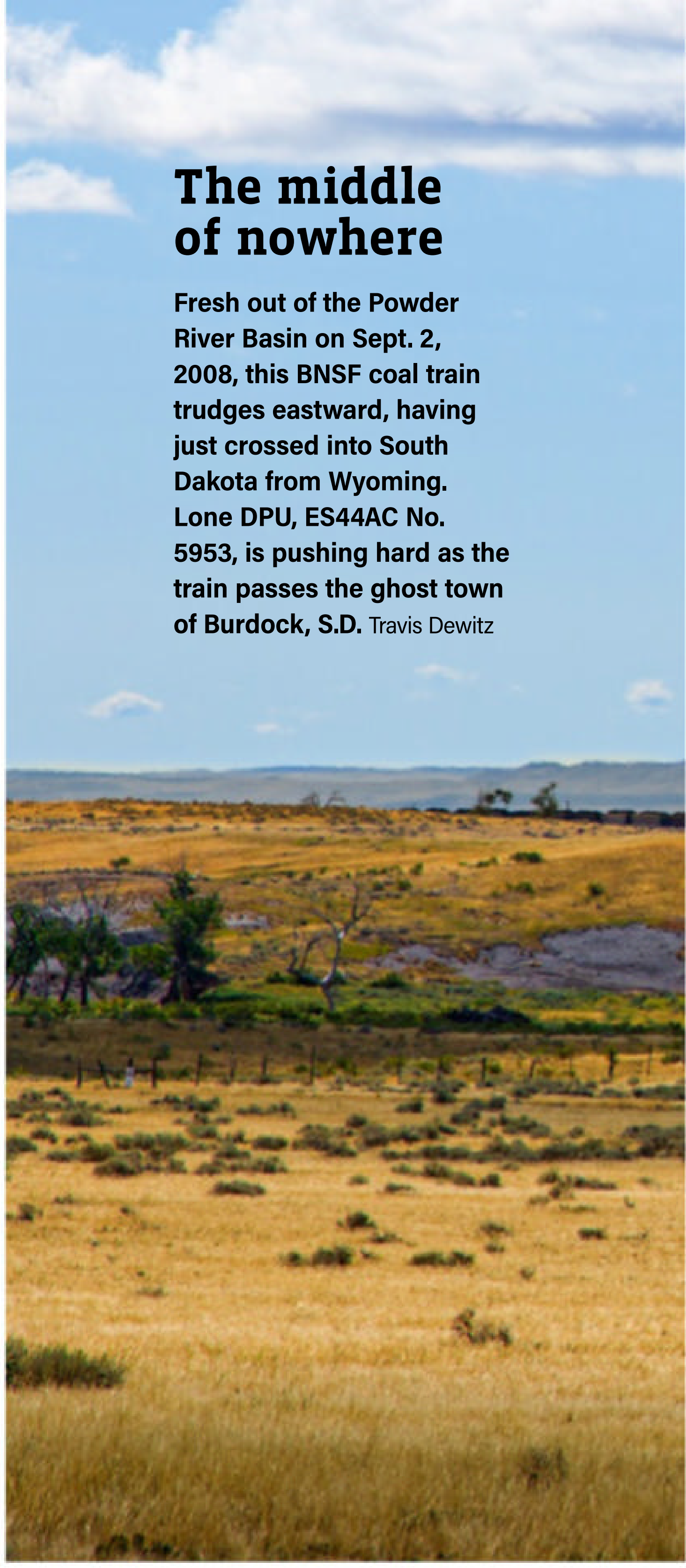
Out of Oblivion

Former Rayonier 2-6-6-2T No. 110 is easing downgrade out of Oblivion, S.D., on the Black Hills Central Railroad the evening of June 25, 2022. The coaches are mostly restored former Oregon Electric and Bamberger Railroad interurban cars. Jeffrey Terry



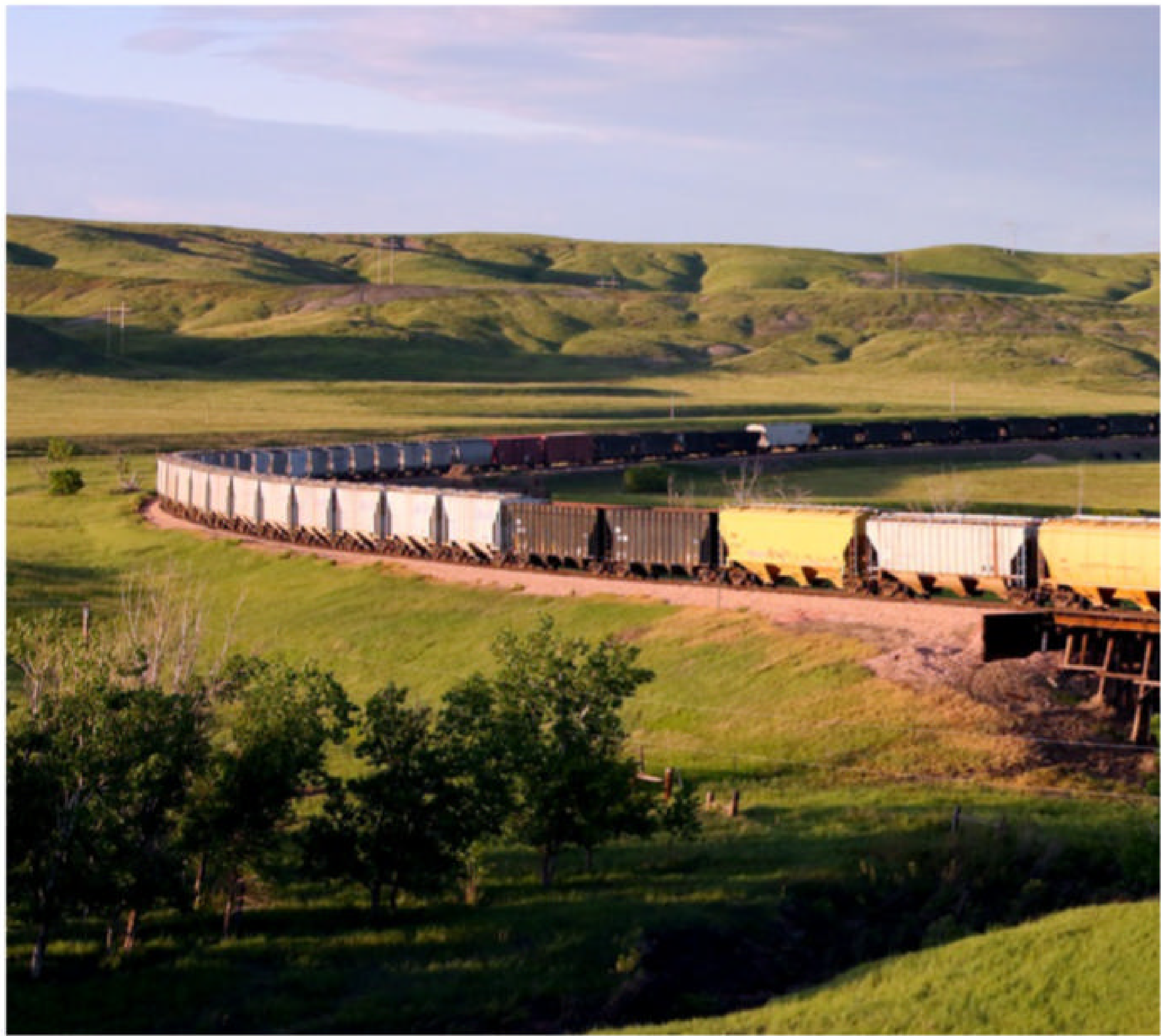
The middle of nowhere

Fresh out of the Powder River Basin on Sept. 2, 2008, this BNSF coal train trudges eastward, having just crossed into South Dakota from Wyoming. Lone DPU, ES44AC No. 5953, is pushing hard as the train passes the ghost town of Burdock, S.D. Travis Dewitz

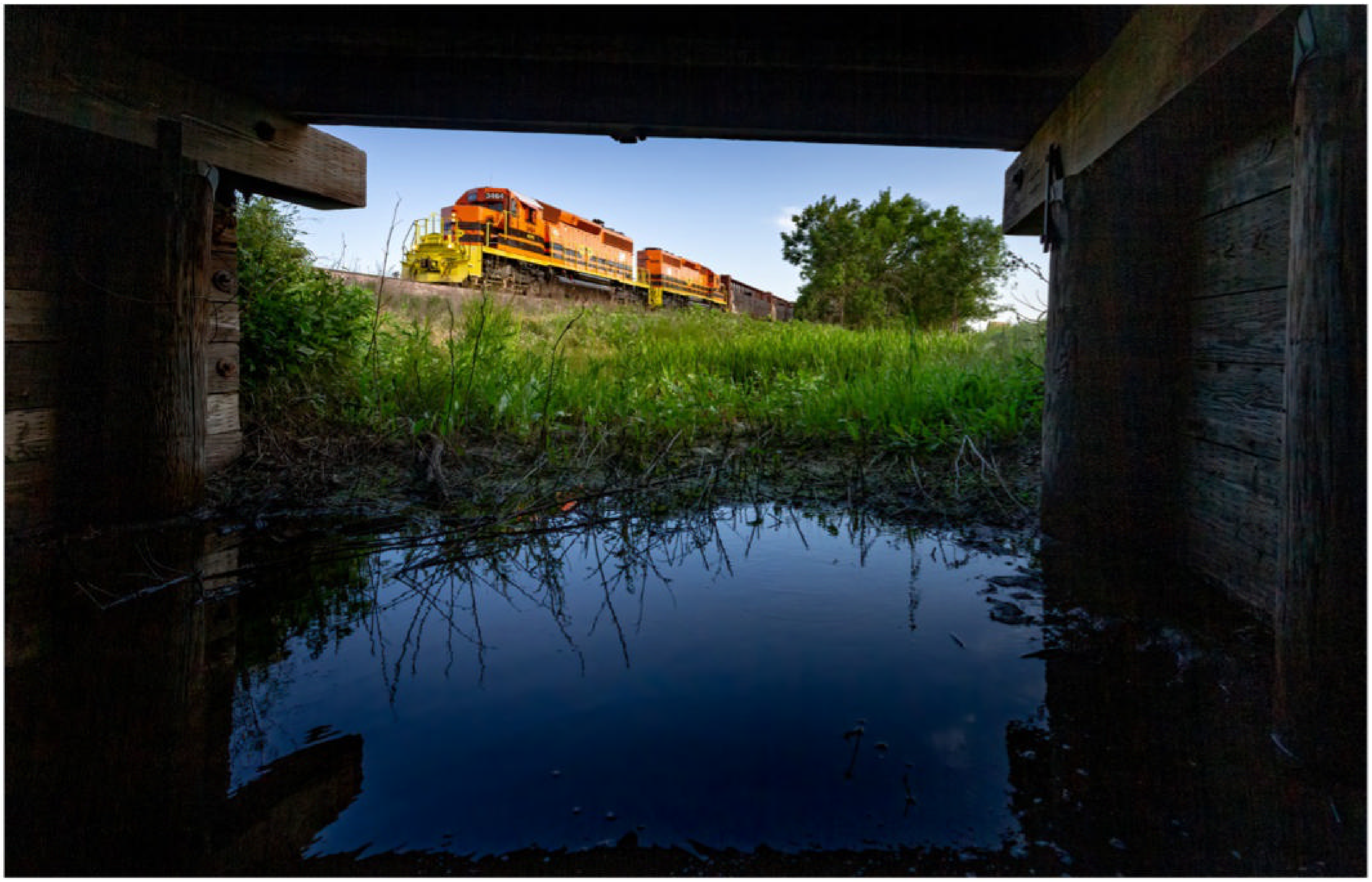


Slowly into the sunset

With little light left, Dakota, Minnesota & Eastern train MHURC-12 is rounding a curve near Wendte, S.D. on June 13, 2008. SD40-2 No. 6426 of sister railroad, Iowa, Chicago & Eastern, is leading. At the time, speed was limited to 10 mph on most of the PRC Sub. Jerry Huddleston

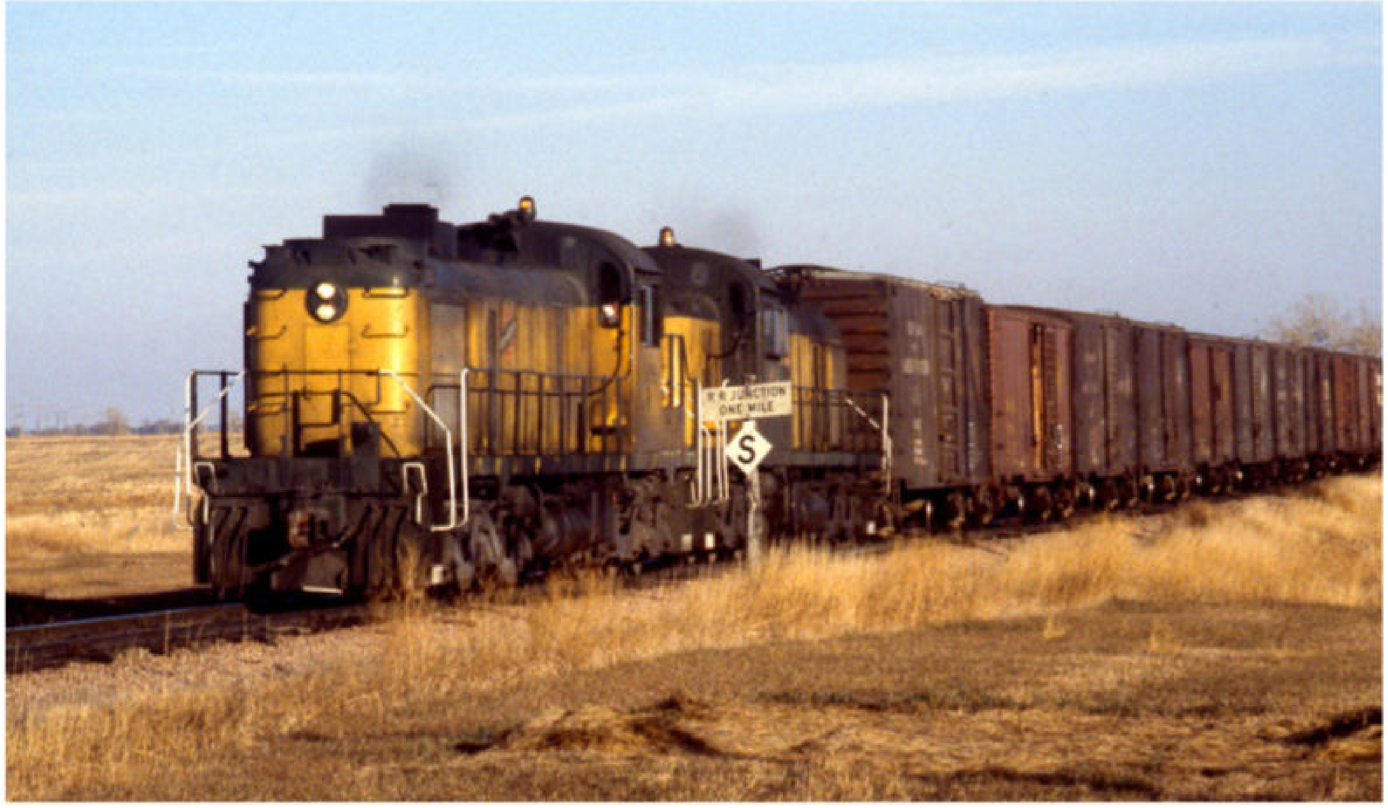


CMSE
DAKOTA MINNESOTA & EASTERN



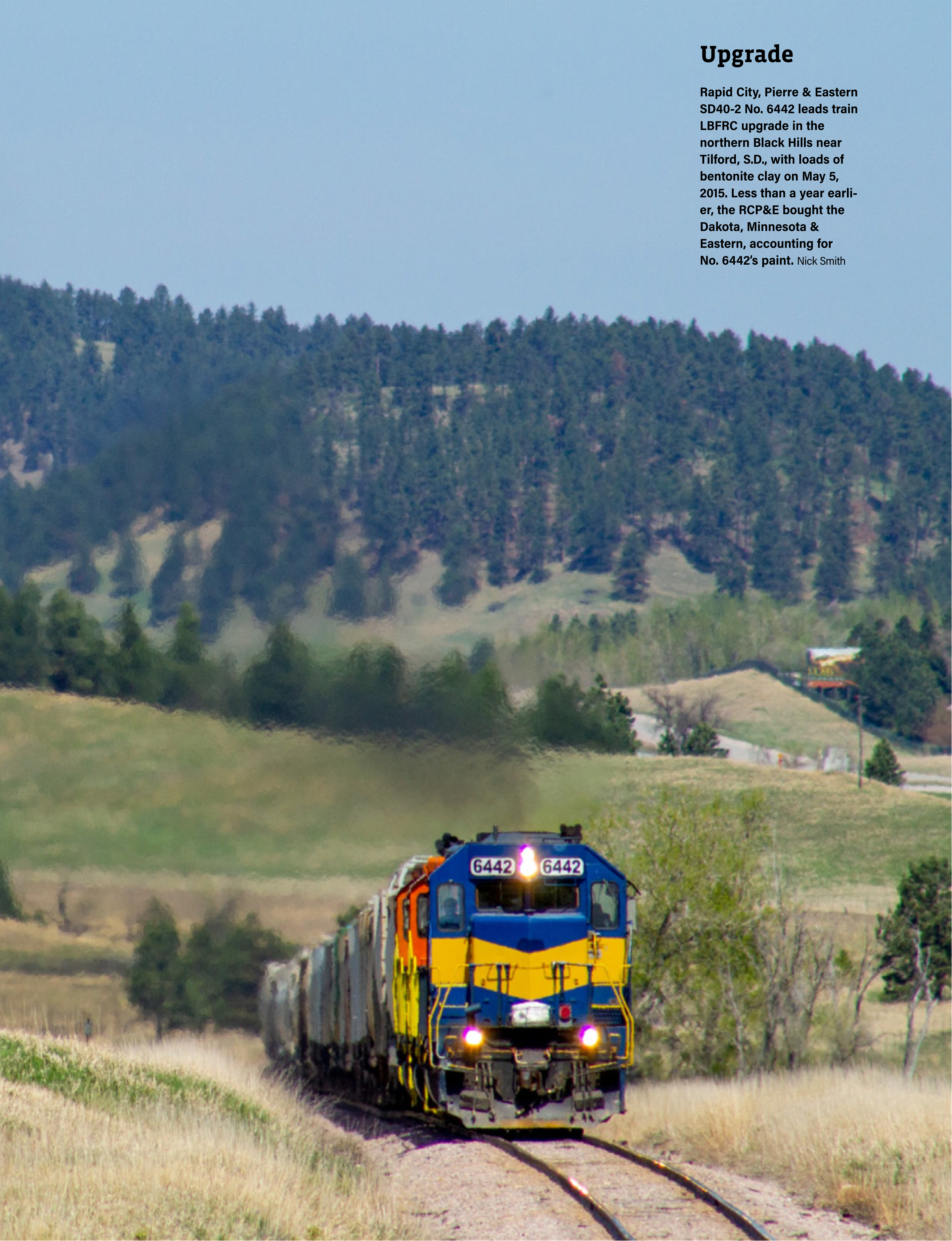
Perfectly framed

A pair of Rapid City, Pierre & Eastern EMD SD40-2s, Nos. 3464 and 3459, power train LDJRC (Dakota Junction to Rapid City). They are framed by a small bridge over a farm channel as they pass south of Oelrichs, S.D., on July 9, 2018. John Crisanti



Old Alcos

The Chicago & North Western rostered seven Alco RSD5s, all built in March and April 1954. Two of them, Nos. 1689 (lead) and 1690, head a line of boxcars outside Wolsey, S.D. Today, No. 1689 still runs and is in the collection of the Illinois Railway Museum. Denny Hamilton



Upgrade

Rapid City, Pierre & Eastern SD40-2 No. 6442 leads train LBFRC upgrade in the northern Black Hills near Tilford, S.D., with loads of bentonite clay on May 5, 2015. Less than a year earlier, the RCP&E bought the Dakota, Minnesota & Eastern, accounting for No. 6442's paint. Nick Smith

NEVADA NORTHERN RAILWAY

HANDS ON HISTORY

SEE IT • FEEL IT • RUN IT!

Come Touch History!

Operate a Steam Locomotive!

Operate a Diesel Locomotive!

Railroad Reality Week!

Operate a 1956 Pontiac Hi-Rail!

Treat Yourself to an Intense, Unforgettable Experience!

Nevada Northern Railway Museum

HANDS ON HISTORY

Ely, Nevada · (775) 289-2085 · www.nnry.com

Instant Gift Certificates Available!